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Sequence of Subheads in Index

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Key to Abbreviations in This Index

Or.—Original Article.
C. R.—Case Report.
B. M.—Bedside Medicine.
Ed.—Editorial.
E. C.—Editorial Comment.
C. N.—Clinical Notes.
L. M. H.—Lure of Medical History.

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California Medical Association, Hotel Del Monte, Monterey County, May 2-5, 1937

CALIFORNIA AND WESTERN MEDICINE

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3. Use metal ware polishes with precaution.

4. From a sanitary standpoint, refrigeration is one of the best methods of preserving foodstuffs. Therefore, perishable articles should always be kept in a refrigerator, close to freezing temperature.

5. Many foods may be contaminated during the course of preparation. It is of great importance to keep such food at temperatures which will inhibit the growth of bacteria.

6. Wash all vegetables and fruits to remove traces of poisonous chemical sprays.

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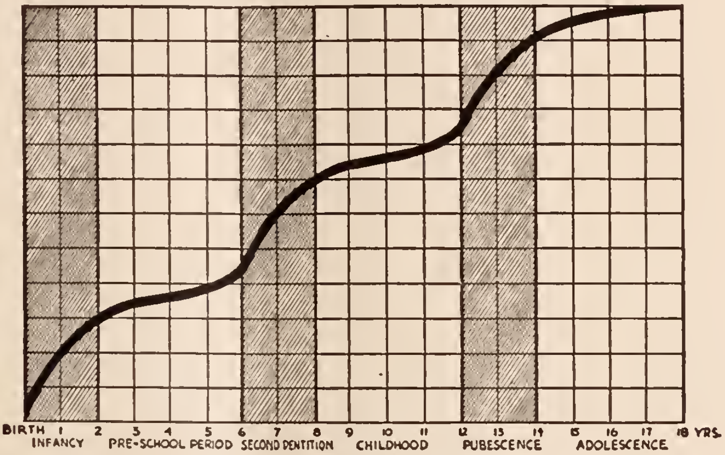

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CALIFORNIA SANITARIUM
For Treatment of Tuberculosis
Belmont, California

CANYON SANATORIUM
For the Treatment of Tuberculosis
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Bootlegged Milk a Real Menace—Health Department Regulation Needed.—As milk is a vital factor in sustaining a healthy body, the fact makes it mandatory, in a sense, for those engaged in public health work to call attention regularly to the health hazards that exist with respect to this article of food. To this end, medical journals and public health bulletins frequently publish appropriate notices in which the general public is warned what to do when purchasing milk for the family table. Volumes have been written on the importance of using only pasteurized milk and other dairy products, and while great progress along this line is noted, there is a loophole under present state and city requirements which permits the sale of so-called bootleg milk in many parts of the state, and which, unfortunately, cannot be abated due to lack of centralized legal authority.

It is said that the root of all evil lies in matters dealing with finances; but it is doubtful that this specific menace would continue if fathers and mothers were fully informed of the danger to which they subject their families when they purchase milk from sources that do not come under health department regulation. It is difficult to accept this adage as the real cause under all circumstances; yet it is true that the bootlegged milk business increased during the recent economic depression, and to such a limit in some localities that it is seriously affecting the business of the legitimate and law-abiding dairyman, whose product is inspected and thereby made safe, so far as the public health is concerned.

Specifically, the unguarded sources are dairies with one or two cows, which sell milk near or adjacent to a district where rigid control measures are enforced. Such dealers are found along the main highways or in small country stores, selling raw milk to consumers who drive out to the country to get fresh raw milk, because they believe money is saved and a better product is obtained. A dealer handling a milk supply that is not inspected by the health department may impress his customers with the fact that he has been in the dairy business for many years, and never had any sickness or complaints reported by the users of his supply. What assurance, however, can he give to his trade that his product will always be free from milk-borne infections? Who knows but that on the day of his boasting he may be selling a contaminated supply of milk which is loaded with typhoid or undulant fever organisms, or other infectious organisms transmissible through milk.

Health department records everywhere show, unequivocally, that milk-borne diseases are seldom, if ever, reported from cities and districts where all milk supplies are inspected, pasteurized and approved, but that many outbreaks involving large and small numbers of persons occur, generally in small communities or in the rural areas where raw milk is sold.

One answer in the solution of this problem is obviously that of educating those individuals who for economic or other personal reasons insist upon patronizing the bootlegger of milk. This phase of the problem can best be met by giving the widest kind of unfavorable publicity to the sources from which uninspected milk is being sold in the county. The second and probably most effective way of getting immediate action would be through a state regulation which would cover from a strictly public health department point of view the supervision and inspection of all milk produced and sold in the state; the smallest as well as the largest dairy to be regulated and controlled in an identical manner. Such state regulations, under the State Department of Health, should conform basically with the Standard Milk Ordinance of the United State Public Health Service.

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Answering a solicitous interrogatory of the ardent believer with an unembroidered and frank "I don't know" should not give offense. On the other hand, such reply, coupled with an "or you either," while possibly true, is superogatory, brusque, and implies discrimination superior to his own.

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Cook Pork Well to Prevent Trichinosis. — Reports received by the Federal Department of Agriculture of several recent cases of illness and some deaths from trichinosis justify a repetition of the warning to cook pork thoroughly before serving. Trichinosis is caused by eating raw or insufficiently cooked pork which contains very small parasites known as trichinae. These parasites occur in a small percentage of hogs, which themselves suffer no apparent inconvenience. But the meat of such hogs, unless yell cooked, constitutes a considerable danger to human health.

The assumption that pork which has passed inspection at a federally inspected establishment is safe even when eaten raw or undercooked is erroneous, department officials state. There is no test that will show definitely whether trichinae are present in a sample of pork, except in some cases of severe infestation. Certain products that are customarily eaten without cooking in the home are given a special processing at federally inspected establishments, and are free from live trichinae. Pork products of the kind that ordinarily are cooked in the home are not processed in meat-packing establishments, since thorough cooking is a complete safeguard.

When infested pork is eaten by human beings in a raw or insufficiently cooked state, the trichinae are set free in the digestive tract, where they give rise to numerous young worms. The latter invade the muscles, thus causing the painful disease, trichinosis, which somewhat resembles typhoid fever, meningitis, and several other diseases that are characterized by fever. Severe cases of this disease are likely to result in death.

The Department of Agriculture has repeatedly cautioned the public to cook pork thoroughly before eating it, and has also given the same warning in pictorial form. A small poster presenting such information has been prepared in both the German and Italian languages as well as in English. A two-color poster suitable for display in meat shops is in course of preparation and will be furnished to interested persons on request. While emphasizing that cooking is a health safeguard, the Department also points out that pork is a savory, nourishing food of excellent nutritive value.

. . . We do not yet sufficiently realize the truth that as, in this life of ours, the physical underlies the mental, the mental must not be developed at the expense of the physical . . .—Herbert Spencer (1860).

The most important quality of education is flexibility. Flexibility is allied to play. Play is the essence of adaptability, and there is no prescribed pattern for it. Opportunities must be used as they come along.—Boyd H. Bode (1932).

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BOOK REVIEWS

List of Books Received

BOOKS RECEIVED

Elements of Psychology. By Knight Dunlap, Professor of Psychology in the University of California at Los Angeles; until January, 1936, Professor of Experimental Psychology in the Johns Hopkins University. Cloth. Pp. 499, with 65 illustrations. Price, $3. St. Louis: The C. V. Mosby Company, 1936.

Diseases of the Respiratory Tract. Clinical Lectures of the Eighth Annual Graduate Fortnight of the New York Academy of Medicine. By twenty-one contributors. Cloth. Pp. 418, with 56 illustrations. Price, $5.50. Philadelphia and London: W. B. Saunders Company, 1936.

Passive Vascular Exercises and the Conservative Management of Obliterative Arterial Diseases of the Extremities. By Louis G. Herrmann, A. B., M. D., Assistant Professor of Surgery, College of Medicine of the University of Cincinnati and the Cincinnati General Hospital; Director of the Vascular Disease Clinics of the Cincinnati General Hospital and the Christian R. Holmes Hospital of the University of Cincinnati. With a Foreword by Mont R. Reid, M. D. Cloth. Pp. 288, illustrated with 80 engravings and 4 colored plates. Price, $4. Philadelphia and London: J. B. Lippincott Company, 1936.

United States Naval Medical Bulletin. Published Quarterly for the Information of the Medical Department of the Navy. Issued by the Bureau of Medicine and Surgery, Navy Department. Division of Publications, Commander Louis H. Roddis, Medical Corps, United States Navy, in Charge. Vol. 34, No. 2, April, 1936. Paper. Pp. 104. Price, 25 cents. United States Government Printing Office, Washington: 1936.

On Percussion of the Chest. Being a Translation of Auenbrugger's Original Treatise Entitled "Inventum novum ex percussione thoracis humani, ut signo abstrusos interni pectoris morbos detegendi" (Vienna, 1761). By John Forbes, M. D. (London, 1824). Introduction by Henry E. Sigerist. Cardboard. Pp. 31. Price, 75 cents. Baltimore: The Johns Hopkins Press, 1936.

The Patient and the Weather. By William F. Petersen, M. D., with the assistance of Margaret E. Milliken, S. M. Volume I, Part 2. Autonomic Integration. Cloth. Pp. 781. Price, $9. Ann Arbor: Edwards Brothers, Inc., 1936.

Security Against Sickness. A Study of Health Insurance. By I. S. Falk. Cloth. Pp. 423. Price, $4. New York: Doubleday, Doran & Company, Inc., 1936.

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NEW MEDICAL BOOKS

Bailey: Emergency Surgery	$14.00
Geschickter and Copeland: Tumors of Bone (New, 2nd Edition)	6.00
Gumpert: Trail Blazers of Science	2.50
Hansel: Allergy of the Nose and Paranasal Sinuses	10.00
Hinton: Syphilis and Its Treatment	3.50

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BOOKS RECEIVED

(Continued from Preceding Page)

Medical Science Exhibits. A Century of Progress. Chicago World's Fair, 1933 and 1934. By Eben J. Carey, Sc.D., M.D., Dean Marquette University School of Medicine, Milwaukee, Wisconsin; Chief, Medical Section Hall of Science, A Century of Progress, Chicago, Illinois, 1931-1934. Cloth. Pp. 204. Price, $2. Chicago: Museum of Science and Industry, 1936.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By Leading Members of the Medical Profession Throughout the World. Edited by Louis Hamman, M. D., Visiting Physician, Johns Hopkins Hospital, Baltimore, Maryland. Volume II, Forty-Sixth Series, 1936. Cloth. Pp. 327. Philadelphia: J. B. Lippincott Company, 1936.

Scientific Refrigeration in Relation to Nutrition and Health. By Lulu G. Graves, Consultant in Nutrition and Organization of Dietary Departments. Paper. Pp. 16. New York: The Temperature Research Foundation of Kelvinator Corporation, 1936.

BOOK REVIEWS

Passive Vascular Exercises. Louis B. Herman, M. D., University of Cincinnati. Pp. 288, illustrated. Price, $4. J. B. Lippincott Company.

This is an excellent, timely monograph. It imparts excellent new light on a difficult clinical problem. Progress is being made in the treatment of certain vascular conditions. The author has well stated principles and methods. Internists and surgeons will find this monograph to be of great value. W.

Elements of Psychology. By Knight Dunlap, Professor of Psychology, University of California, Los Angeles. Pp. 444. Price, $3. C. V. Mosby Company.

An acceptable presentation of major elements. W.

(Continued on Page 14)

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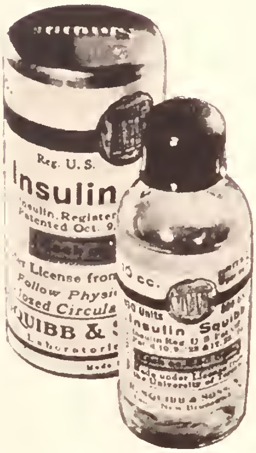

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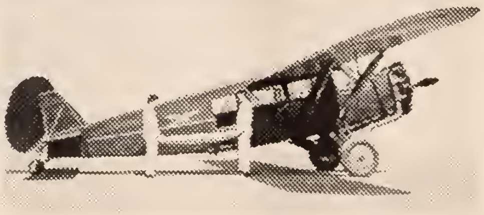

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BOOK REVIEWS

(Continued from Page 12)

Diseases of the Respiratory Tract. Clinical Lectures of the Eighth Annual Graduate Fortnight of the New York Academy of Medicine. By Twenty-One Contributors. Pp. 418, with 56 illustrations. Philadelphia and London: W. B. Saunders Company, 1936. Cloth. Price, $5.50 net.

This text contains the twenty-one clinical lectures given during New York Academy of Medicine's fortnight. Needless to say that they reflect the latest knowledge upon respiratory-tract disease. W.

(Continued on Page 17)

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BOOK REVIEWS

(Continued from Page 14)

Patient and the Weather. By William F. Petersen, M. D., University of Chicago. Cloth. Pp. 781. Price, $9. Edward Brothers, Ann Arbor, Michigan.

With many graphs, charts, and illustrations, the author develops his subject of the effect of weather on individuals. Cyclonic circulation, atmospheric pressure, temperature, humidity, sunlight, electricity, meteoropathology, are discussed in detail and their effect upon the human individual. A tremendous amount of material is given and effects are illustrated by many case histories and clinical studies. There are 388 illustrations.

Physicians will find much of interest and assistance in this text. It belongs in every internist's library. W.

Medical Science Exhibits—A Century of Progress. By Eben J. Carey, M. D. Price, $2. Write to P. J. Byrne, 624 South Michigan Avenue, Chicago, Illinois.

Doctor Carey, the director of medical exhibits of the 1931-1934 Chicago Century of Progress, has well set forth, by means of illustrations and descriptive text a permanent record of the work in preparing the exhibits and their final completion. This book should be very useful to those who sponsor similar exhibits in public expositions and in museums. W.

International Clinics. A Quarterly. Vol. II, Forty-Sixth Series. J. B. Lippincott Company.

Fourteen articles on current subjects of helpful value and up to the established standard of these clinical publications. W.

Security Against Sickness. A Study of Health Insurance. By I. S. Falk. Cloth. Pp. 423. Doubleday, Doran & Company, New York.

The author, known as a proponent for health insurance and a persisting agitator of the question, has given a comprehensive and favorable statement of foreign methods. He discusses some American conditions. He concludes with a restatement of his repeated deductions and arguments. Worth reading, but not acceptable for American people or the profession of medicine. W.

TWENTY-FIVE YEARS AGO

(Continued from Text Page 112)

sized the value of decompression and made great improvements in the technique of the operation, that the procedure became well known and quite generally adopted. . . .

From an article on "Functional Insufficiencies of the Myocardium" by H. D'Arcy Power, M.D., San Francisco.

I have not chosen the subject of this paper on account of any new light I can shed upon an old story, nor have I any extensive series of cases to record, but because, in the daily run of general practice, the victims of the condition I am to deal with are numerous and constitute an important element of our clientele. Yet, nevertheless, their symptoms are too often misinterpreted; sometimes, perhaps, unavoidably so. . . .

From an article on "The Treatment of Hemoptysis in Tuberculosis" by Max Rothschild, M. D., San Francisco.

One of the most erratic and most alarming symptoms in tuberculosis of the lungs is hemoptysis—erratic because we see many cases of advanced phthisis which never have had a hemorrhage, or even a trace of blood in their sputum; and we see other cases in which a sudden hemorrhage is the first symptom of the disease." . . .

From an article on "The Hypodermic Use of Hexamethylenamin" by F. F. Gundrum, M. D., Sacramento.

The first work published concerning the excretion of hexamethylenamin, when used on laboratory animals and

(Continued on Next Page)

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TWENTY-FIVE YEARS AGO

(Continued from Preceding Page)

clinically, was that of Crowe, in 1908. He was able to show in the laboratory that, following the administration of hexamethylenamin by mouth, the drug was excreted in the bile, pancreatic juice, saliva, milk, and urine of dogs. . . .

From an article on "Rabies in California" by W. A. Sawyer, M.D., Director of State Hygienic Laboratory, Berkeley.

For a year and a half there has been prevalent among dogs in certain parts of California a disease frequently transmitted to other warm-blooded animals, including cattle and horses, and also to man. Rabies, or hydrophobia, is a striking example of those diseases which are perpetuated among certain animals and occasionally are transmitted in one way or another to man. . . .

The Pacific Slope, after a long freedom from the disease, has at last been forced to add rabies to the list of diseases which demand suppression through concerted activity of the defenders of the public health. . . .

In a recent article Black and Powers describe a small outbreak of rabies among the dogs of Los Angeles in 1898. . . .

BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 112)

syndicate engaged in illegal operations, into police headquarters this afternoon. . . . According to the police . . . these were seized in raids on four Hollywood medical establishments. . . . " (United Press dispatch, dated Hollywood, June 5, and printed in the Pasadena *Post*, June 1, 1936.)

"Sufficient paraphernalia to run a miniature hospital was seized in a raid conducted yesterday on the Oakland offices of the late Dr. J. B. Folsom in connection with investigation of an alleged coast-wide illegal operation ring. The raid was headed by Assistant District Attorney Frank Coakley of Alameda County. Coakley stated that the offices, located at 3849 Grove Street, represented 'a complete illegal operation layout with sufficient equipment for running an abortion institution of elaborate and unlimited capacity.' . . . The offices assertedly were purchased five months prior to Doctor Folsom's death on July 31, 1935, by Dr. George E. Watts of Los Angeles, alleged part owner of the abortion ring." (San Francisco *Examiner*, June 14, 1936.)

"Dr. George H. Wymann, brought into court Tuesday morning for preliminary arraignment following his arrest last May 13, growing out of his assertedly performing an illegal operation upon the person of Sylvia A. Carr, was ordered held under $10,000 bail. . . . The crime against the physician was brought to light when the patient, who resided at 1009 East Fifty-sixth Street, succumbed following the performance of the illegal operation. . . . Although he enjoyed a comparatively lucrative practice, the playboy doctor persisted in having occasional brushes with authorities over some provisions of legal and ethical practice. Trafficking in drugs and petty theft have proved sufficient for imprisonment for him on separate occasions. . . ." (Los Angeles *Eagle*, May 22, 1936.)

(Continued on Page 20)

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 18)

Doctor Wymann's license was revoked by the Board of Medical Examiners October 23, 1924, and on October 17, 1927, restored, he being placed on probation for a period of five years.

"Oakland police and federal narcotic agents joined yesterday in a surprise raid on the West Oakland office of Dr. John Charles Coleman, jailing him. Coleman, thirty, was charged with the illegal sale and possession of drugs and with having written fictitious prescriptions calling for narcotics. . . ." (San Francisco *Chronicle*, May 30, 1936.)

"Another resolution that created a stir before it was adopted by the legislature at the recent special session, was by Assemblyman Hunt, calling for appointment of a committee and an appropriation of $300 to investigate violations of the Medical Practice Act, particularly the matter of illegal operations. Hunt charged, in arguing for his resolution, that there is a syndicate operating a chain of places where such operations are performed and that in a downtown Los Angeles office building an entire floor is devoted to a 'hospital' for such purposes." (Los Angeles *Times*, May 27, 1936.)

"Trial of Dr. J. Douglas Thompson, licensed chiropractor, who will face the court a second time on charges of false advertising, was set today for June 2, by Police Judge Joseph A. Kennedy after he overruled a demurrer to the amended complaint filed by Joseph Brown, Doctor Thompson's attorney. Brown contended certain sentences were deleted from the amended complaint, which narrowed the issue down and asked that they be reinstated.

(Continued on Page 22)

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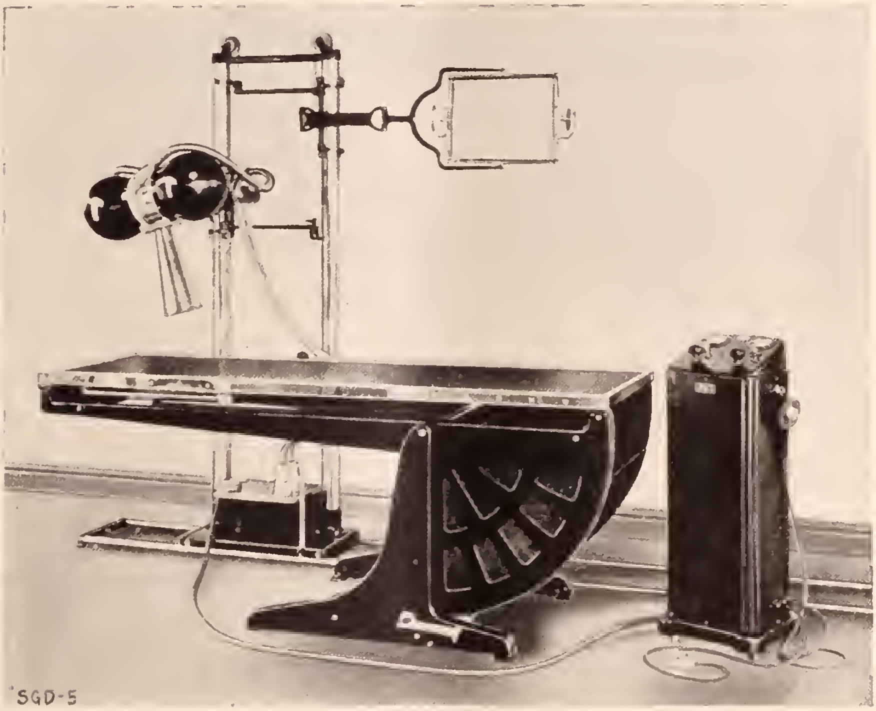

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 20)

A jury disagreed at the first trial of Doctor Thompson, who specifically was alleged to have advertised a product in violation of the medical laws." (Oakland *Tribune,* May 12, 1936.)

"Dr. J. Walter Clark, South Gate and Huntington Park chiropractor, today was free on three years' probation in connection with the burglarizing of the Los Angeles Drug Company of $30,000 worth of drug accessories in five months. . . ." (Huntington Park *Signal,* May 9, 1936.)

"Lloyd Garrison, thirty, chiropractor, 2971 California Street, with offices at 858 Sutter Street, yesterday heard himself charged in Municipal Court with performing an illegal operation. Bernice Rousse, twenty-five, 250 Taylor Street, waitress, now being treated in San Francisco Hospital, was the victim, the court was told." (San Francisco *Chronicle,* May 26, 1936.)

"Dr. Karl F. Meyer, director of the Hooper Foundation for Medical Research in the University of California, was today awarded the degree of Doctor of Medicine, Honorary, by the College of Medical Evangelists of Los Angeles. The award was made in recognition of his work in the field of public health." (San Francisco *News,* June 2, 1936.)

Federal Food and Drugs Act Report.—Fresh, canned and frozen fish and shellfish presenting a variety of violations of the Federal Food and Drugs Act were seized in April, says a report by the Food and Drug Administration. Decomposition, the commonest cause of adulteration, again leads the list. Shipments seized on that account included 41,100 cases of canned salmon, 1,016 cases of canned tuna, 10,150 pounds of frozen shrimp, and 275 cases of canned shrimp. The canned shrimp was also misbranded because the cans bore a label approved for use only on inspected shrimp, and the goods seized were packed in a plant not under inspection. Tullibees, a strain of whitefish seized in great quantities in recent years, are still found in interstate commerce infested with threadlike encysted worms; 48,100 pounds were seized in April.

Six shipments of refrigerated crabmeat from Florida, carrying certain bacteria associated with filth, were seized at norther destinations, and 2,700 cans of oysters, adulterated with excessive and dangerous quantities of broken oyster shell, were confiscated. The pieces of shell varied in size from tiny slivers to plates an inch square. Raw

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oysters in pint cans (300 cans) also were picked up on a showing that they were short in volume.

Dairy Products, Other Foods Seized.—Dairy products seized during the month were the following: 145 pounds of butter short in weight and containing less than the legal requirement of butterfat; 400 pounds of dirty "packing stock" butter; 100 jars of a limburger cheese spread containing particles of insects and animal hairs; 10,567 pounds of miscellaneous cheeses damaged in the March floods; and 390 packages of a purported "Old English" cheese claiming to owe its sharp flavor to its age and curing process, when in fact a liberal admixture of red pepper was the element that left the advertised "tingle on the tongue." . . .

Late seizures, winding up the campaign against isopropyl alcohol mixtures masquerading as the conventional grain-alcohol rubs, involved 420 bottles of the misbranded solution. One pharmaceutical only was seized in April—a shipment of pituitary solution found on test to be below the legal standard of strength.

Patent Medicines.—Patent medicines are conspicuously present in the report. The products seized, their compositions, and the curative claims alleged to be false and fraudulent, are as follows:

"Anti-Itch," a petrolatum ointment containing zinc oxid, glycerol, wintergreen and carbolic acid (10.63 per cent), for itch, scabies, eczema and other skin irritations (the product was also held to be misbranded under the Federal Caustic Poison Act since it had no label statement of the common name of the poison it contained, no "Poison" warning, and no antidote in case of accidental injury).

"Booth's Hyomei," a solution of eucalyptol, menthol and creosote in alcohol and water, for catarrh, hay fever, catarrhal coughs, croup, bronchitis, catarrhal laryngitis, lung affections and difficult breathing (the product was further misbranded in declaring an alcohol content of 12 per cent when it contained only 9 per cent, and in representing its vapors as antiseptic).

"Bralot Rheumatic Tablets," containing amidopyrin, sodium salicylate, and coated with chocolate, for rheumatism, gout, neuralgia, neuritis and sciatica.

"Diaplex," consisting of the dried leaves and stems of the salt bush, for diabetes.

"Four Leaf Clovers," pink tablets containing boric acid, borax and starch, falsely represented as antiseptic, and for various ailments of women.

"G. S. Alterative Tonic," a solution of plant drugs and potassium iodid in alcohol and water, for pellagra, rheumatism, liver and kidney ailments, and as a tonic.

"H. P. Antiseptic and Healing Balm," a lead oleate ointment not antiseptic as represented, and claimed safe despite its lead content, for piles, putrid sores, proud flesh, gangrene, lead poisoning, gunshot wounds, all infections, eczema, sores, tick bites, barber's itch, felons, boils, carbuncles, erysipelas, blood poisoning, x-ray burns, ringworm, impetigo, septicemia, pyemia, nasal infections, sinus trouble, hay fever, ulcers and mercury sores.

"Hi-Test Catarrhal Jelly," a deteriorated salvage drug containing petrolatum, menthol and eucalyptol, for catarrh and hay fever; "Kopp's," a syrup containing the narcotic morphin sulphate, represented as safe for children.

"Lacta Kaolin Alpha," consisting of lactose, kaolin (clay), agar and cocoa, represented as a food, although composed chiefly of non-food ingredients; "Lacta-Kaolin Laxative," of the same composition as the preceding product, with the addition of the coal-tar laxative phenolphthalein, the label, however, representing the difference between the two as one of agar and cocoa content, without reference to the presence of the laxative drug, for dysentery, cholera, gastro-enteric disorders, halitosis, intestinal and colon disorders, toxemia, auto-intoxication, high blood pressure, and bilious conditions.

"Mentos," a water solution of sulphur, borax, ammonia, and perfume, represented as antiseptic but found on test incapable of killing pathogenic organisms, for dandruff, ringworm, falling hair, scaling scalp, psoriasis, eczema,

(Continued on Next Page)

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(Continued from Preceding Page)

skin diseases, pimples, warts, and to prevent baldness and restore hair.

"Mother Beach Stomach Tablets," made of sodium bicarbonate, bismuth subnitrate and magnesium oxid, for stomach ulcers, indigestion, dyspepsia, headaches, and lack of appetite.

"My-Kel Tooth Powder," sodium perborate and talc, flavored with wintergreen, for keeping the gums firm, building up the tooth enamel, for pyorrhea, and to maintain freedom from mouth infections.

"Quality Sealed Sore Throat Remedy," another deteriorated salvage drug, a solution of potassium chlorate, tannic and carbolic acid in glycerin and water, short of the declared volume, for sore throat.

"Tricasco," a solution of plant extracts, licorice, a laxative and sugar, for forty ailments, including consumption, pneumonia, rheumatism, palpitation of the heart, gout, gall-stones, and stomach ulcers.

"Ward's Vitamized Tonic Tablets," containing iron, iodin, calcium, a fish-liver oil and berberin, making claims of vitamin A and D potency that were found on test to be unsupportable.

Spotted Fever in East Again, So Beware of the Dog Ticks.—Three recent cases of Rocky Mountain spotted fever near Washington, D. C., emphasize the need for vigilance against the wood ticks, or dog ticks, that spread this disease, warns Dr. F. C. Bishopp of the United States Department of Agriculture. Fortunately, Doctor Bishop says, only a small proportion of these common ticks are infected. The disease, however, is widespread and has a high mortality. In the East infected ticks are known to occur in Maryland, Virginia, Delaware and North Carolina, and cases of spotted fever have been reported from nearly all states in the eastern part of the country except in New England, Ohio, Michigan, Wisconsin, and Mississippi. A large percentage of the cases reported in the East have been in Maryland and Virginia in the vicinity of Washington, D. C., and in North Carolina. In the far West, spotted fever is carried by a different species of tick.

Despite the cold winter, ticks are unusually abundant in the East this year. As many as a hundred have been picked off a dog at the end of a day in the woods. Although adult ticks prefer the blood of dogs, they may attach themselves to horses, cattle, and larger wild animals, as well as to man. The young ticks—"seed ticks" or "nymphs"—relish the blood of meadow and pine mice and other small wild animals. In fact, ticks disappear when there are none of these little animals on which they can feed in their early stages. Clearing out the underbrush that protects both mice and ticks, therefore, cuts down the number of ticks.

Ticks are most numerous in the early summer. Usually they practically disappear by the first of August, making the late summer safer for camping trips and hikes.

Doctor Bishopp emphasizes the importance of confining dogs in yards throughout the tick season and of examining them frequently. Every tick, he says, should be pulled off the dog with forceps and dropped into a can of kerosene. Ticks that have fed on a dog for a few hours are immediately dangerous, but they are not likely to detach until fully fed, and the engorged females will not reattach. As the disease can be contracted from crushed ticks, through cuts or scratches, it is a safety measure to wash the hands thoroughly after touching ticks. Derris powder may be scattered lightly over heavily infested dogs. This kills any ticks on the dog and tends to repel others.

If it is necessary to go into tick-infested places it is advisable to wear high-top shoes over army-type trousers and systematically to examine the body and head at least twice a day. One of the favorite places of attachment is in the hair at the base of the head. Ticks are not likely to transmit the disease unless they remain attached for at least six hours.

Ticks are very hardy, Doctor Bishopp says. They can live from year to year with no food. Adult ticks put in

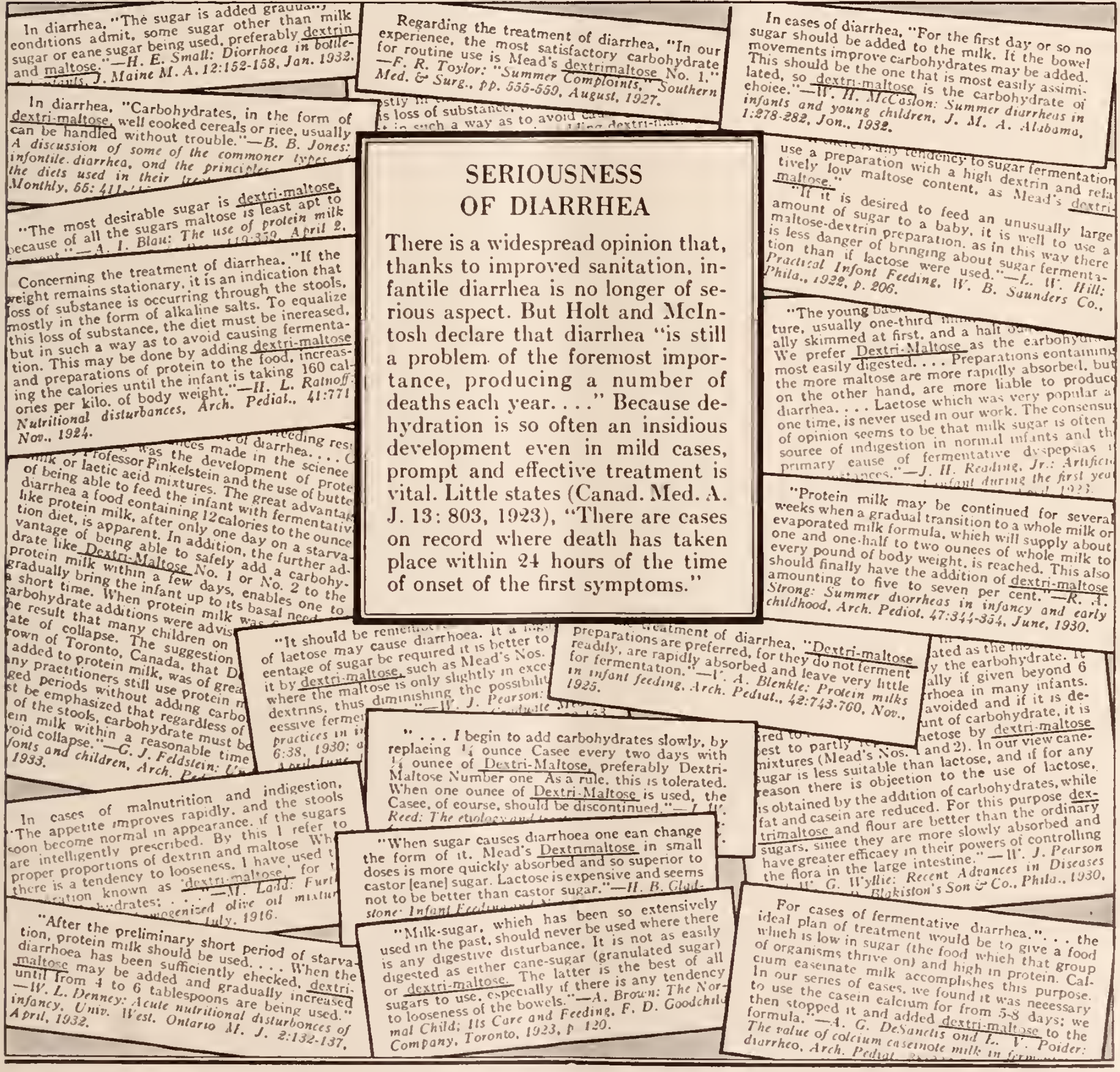
(Continued on Page 26)

DIARRHEA

"the commonest ailment of infants in the summer months"

(HOLT AND McINTOSH: HOLT'S DISEASES OF INFANCY AND CHILDHOOD, 1933)

One of the outstanding features of DEXTRI-MALTOSE is that it is almost unanimously preferred as the carbohydrate in the management of infantile diarrhea.



In diarrhea, "The sugar is added gradua conditions admit, some sugar other than milk sugar or cane sugar being used, preferably dextrin and maltose."—*H. E. Small: Diarrhoea in bottle- J. Maine M. A. 12:152-158, Jan. 1932.*

Regarding the treatment of diarrhea, "In our experience, the most satisfactory carbohydrate for routine use is Mead's dextrimaltose No. 1."—*F. R. Taylor: "Summer Complaints," Southern Med. & Surg., pp. 555-559, August, 1927.*

In cases of diarrhea, "For the first day or so no sugar should be added to the milk. If the bowel movements improve carbohydrates may be added. This should be the one that is most easily assimilated, so dextri-maltose is the carbohydrate of choice."—*W. H. McCaslon: Summer diarrheas in infants and young children, J. M. A. Alabama, 1:278-282, Jan., 1932.*

In diarrhea, "Carbohydrates, in the form of dextri-maltose, well cooked cereals or rice, usually can be handled without trouble."—*B. B. Jones: A discussion of some of the commoner types infantile diarrhea, and the principles the diets used in their Monthly, 66: 411,*

"The most desirable sugar is dextri-maltose, because of all the sugars maltose is least apt to"—*A. I. Blau: The use of protein milk 119:359, April 2,*

use a preparation with a high dextrin and relatively low maltose content, as Mead's dextri-maltose."

"If it is desired to feed an unusually large amount of sugar to a baby, it is well to use a maltose-dextrin preparation, as in this way there is less danger of bringing about sugar fermentation than if lactose were used."—*L. W. Hill: Practical Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 206.*

Concerning the treatment of diarrhea. "If the weight remains stationary, it is an indication that loss of substance is occurring through the stools, mostly in the form of alkaline salts. To equalize this loss of substance, the diet must be increased, but in such a way as to avoid causing fermentation. This may be done by adding dextri-maltose and preparations of protein to the food, increasing the calories until the infant is taking 160 calories per kilo. of body weight."—*H. L. Ratnoff: Nutritional disturbances, Arch. Pediat., 41:771 Nov., 1924.*

"The young ture, usually one-third ally skimmed at first, and a half We prefer Dextri-Maltose as the carbohydrate most easily digested. . . . Preparations containing the more maltose are more rapidly absorbed, but on the other hand, are more liable to produce diarrhea. . . . Lactose which was very popular at one time, is never used in our work. The consensus of opinion seems to be that milk sugar is often source of indigestion in normal infants and th primary cause of fermentative dyspepsias"—*J. H. Reading, Jr.: Artifici infant during the first yea*

feeding res ces made in the science of diarrhea. . . . was the development of prote Professor Finkelstein and the use of butte ilk or lactic acid mixtures. The great advantage of being able to feed the infant with fermentative diarrhea a food like protein milk, containing 12 calories to the ounce, after only one day on a starvation diet, is apparent. In addition, the further advantage of being able to safely add a carbohydrate like Dextri-Maltose No. 1 or No. 2 to the protein milk within a few days, enables one to gradually bring the infant up to its basal need a short time. When protein milk was arbohydrate additions were advis he result that many children on ate of collapse. The suggestion own of Toronto, Canada, that D added to protein milk, was of grea ny practitioners still use protein m ged periods without adding carbo st be emphasized that regardless of of the stools, carbohydrate must be ein milk within a reasonable time oid collapse."—*G. J. Feldstein: Un fants and children, Arch. Pe 1933.*

"Protein milk may be continued for several weeks when a gradual transition to a whole milk or evaporated milk formula, which will supply about one and one-half to two ounces of whole milk to every pound of body weight, is reached. This also should finally have the addition of dextri-maltose amounting to five to seven per cent."—*R. A. Strong: Summer diarrheas in infancy and early childhood, Arch. Pediat. 47:344-354, June, 1930.*

"It should be of lactose may cause diarrhoea. It a centage of sugar be required it is better to it by dextri-maltose, such as Mead's Nos. where the maltose is only slightly in exce dextrins, thus diminishing the possibilit cessive fermen"—*W. J. Pearson: practices in in 6:38, 1930;*

treatment of diarrhea, "Dextri-maltose preparations are preferred, for they do not ferment readily, are rapidly absorbed and leave very little for fermentation."—*V. A. Blenkle: Protein milks in infant feeding, Arch. Pediat., 42:743-760, Nov., 1925.*

ated as the y the carbohydrate. It ally if given beyond 6 rhoea in many infants. avoided and if it is de unt of carbohydrate, it is actose by dextri-maltose red to est to partly and 2). In our view cane- mixtures (Mead's Nos. sugar is less suitable than lactose, and if for any reason there is objection to the use of lactose, is obtained by the addition of carbohydrates, while fat and casein are reduced. For this purpose dextrimaltose and flour are better than the ordinary sugars, since they are more slowly absorbed and have greater efficacy in their powers of controlling the flora in the large intestine."—*W. J. Pearson W. G. Wyllie: Recent Advances in Diseases Blakiston's Son & Co., Phila., 1930.*

". . . I begin to add carbohydrates slowly, by replacing ¼ ounce Casec every two days with ¼ ounce of Dextri-Maltose, preferably Dextri-Maltose Number one As a rule, this is tolerated. When one ounce of Dextri-Maltose is used, the Casec, of course, should be discontinued."—*J. W. Reed: The etiology*

In cases of malnutrition and indigestion, "The appetite improves rapidly, and the stools soon become normal in appearance, if the sugars are intelligently prescribed. By this I refer to proper proportions of dextrin and maltose Wh there is a tendency to looseness. I have used t known as 'dextri-maltose,' for drates; . . ."—*M. Ladd: Furt olive oil mixtur July, 1916.*

"When sugar causes diarrhoea one can change the form of it. Mead's Dextrimaltose in small doses is more quickly absorbed and so superior to castor [cane] sugar. Lactose is expensive and seems not to be better than castor sugar."—*H. B. Gladstone: Infant Feeding*

"After the preliminary short period of starvation, protein milk should be used. . . . When the diarrhoea has been sufficiently checked, dextri-maltose may be added and gradually increased until from 4 to 6 tablespoons are being used."—*W. L. Denney: Acute nutritional disturbances of infancy, Univ. West. Ontario M. J. 2:132-137, April, 1932.*

"Milk-sugar, which has been so extensively used in the past, should never be used where there is any digestive disturbance. It is not as easily digested as either cane-sugar (granulated sugar) or dextri-maltose. The latter is the best of all sugars to use, especially if there is any tendency to looseness of the bowels."—*A. Brown: The Normal Child; Its Care and Feeding, F. D. Goodchild Company, Toronto, 1923, p 120.*

For cases of fermentative diarrhea, ". . . the ideal plan of treatment would be to give a food which is low in sugar (the food which that group of organisms thrive on) and high in protein. Calcium caseinate milk accomplishes this purpose. In our series of cases, we found it was necessary to use the casein calcium for from 5-8 days; we then stopped it and added dextri-maltose to the formula."—*A. G. DeSanctis and L. V. Paider: The value of calcium caseinate milk in ferm diarrhea, Arch. Pediat.*

SERIOUSNESS OF DIARRHEA

There is a widespread opinion that, thanks to improved sanitation, infantile diarrhea is no longer of serious aspect. But Holt and McIntosh declare that diarrhea "is still a problem of the foremost importance, producing a number of deaths each year. . . ." Because dehydration is so often an insidious development even in mild cases, prompt and effective treatment is vital. Little states (Canad. Med. A. J. 13: 803, 1923), "There are cases on record where death has taken place within 24 hours of the time of onset of the first symptoms."

Just as DEXTRI-MALTOSE is a *carbohydrate* modifier of choice, so is CASEC (calcium caseinate) an accepted *protein* modifier. Casec is of special value for (1) colic and loose green stools in breast-fed infants, (2) fermentative diarrhea in bottle-fed infants, (3) prematures, (4) marasmus, (5) celiac disease.

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(Continued from Page 24)

vials without food on April 10, 1933, for observation, are still alive and vigorous. Hence it cannot be assumed that an area is tick-free, even if all the animals on which they might live have been driven out or destroyed in one season.

Besides being carriers of spotted fever, ticks sometimes cause a form of paralysis. The effect of their bites often persists for months.

Nebraska Is Fortieth State to Eradicate Bovine Tuberculosis.—Nebraska on June 1 was officially designated by the United States Department of Agriculture as a modified accredited area, signifying that the state is practically free from bovine tuberculosis. Nebraska is the fortieth state to attain such recognition.

As Nebraska is a state with a large number of cattle, it was necessary to conduct a great many tuberculin tests. The greater part of the testing was done during the last two years. Livestock owners in nearly all sections of the state coöperated.

The accreditation of Nebraska is especially significant in view of the large number of feeder cattle that are shipped from the state and may now be shipped without a special tuberculin test. It will be necessary now only to retest the various counties at regular intervals. Retesting is a precaution to keep the disease from getting another foothold, officials explain. Although retesting is not so difficult as the first tests, it is essential and causes little inconvenience to herd owners.

Of the eight remaining states not in the modified accredited area, one, South Dakota, is in the Middle West, one, California, is on the Pacific Coast, and six, New York, New Jersey, Pennsylvania, Maryland, Vermont, and Rhode Island, are in the northeastern group of states. It is expected that some of this territory will be accredited within the next few months.

"Quality" Milk.—Dr. M. J. Rosenau of Harvard University said recently, in discussing the subject of quality in milk: "A man of quality is at once certified with superior attributes. It is the same with milk. There are grades in the ranks of quality. Certified milk ranks with royalty, Grade A stands in the fine fellowship of the legion of honor, and pasteurized milk is captain of the league of peace and security." Thus did the eminent physician and sanitarian suggest the importance of quality in milk and at the same time subtly indicate the relationship of different grades of milk to each other and to their users.

What Is "Quality" Milk?—Continuing his discussion, Doctor Rosenau asks himself the question, "What is 'quality' milk?" and answers it by saying: "It is clean milk of uniformly low bacterial content, free from dirt and pathogenic organisms. It is produced from healthy cows, free from tuberculosis, Bangs' disease, mastitis, and all other maladies, and is handled by healthy employees, using sanitary methods and clean and sterile equipment and utensils. Finally, such a safe milk must also be relatively high in nutritive values, with an ample content of butterfat and total solids, and an abundance of normal vitamins, the content of some of which in milk is definitely influenced by the ration fed to the cow."

Today public health authorities and the dairy industry agree that general market milk distributed in cities should be pasteurized. According to estimates of the Office of Milk Investigation of the United States Public Health Service, nearly 90 per cent of all milk now sold in cities of 10,000 or more population is pasteurized. The story of "peace and security" thus established is told in the record of decline and practical elimination of milk-borne disease in this country.

What Is Certified Milk?—Certified milk has, as a rule, been exempt from pasteurization because of the unusual

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precautions which must be observed in its production and handling, and the careful medical, veterinary, sanitary, and laboratory supervision applied to it under the direction of a medical milk commission appointed by the local medical society. Milk may be labeled "certified" and sold as such when it meets the rigid requirements imposed by this commission.

The local medical milk commissions in the United States, now approximately eighty in number, are working toward unification in policies and standards under the American Association of Medical Milk Commissions. Each local commission employs a physician, a veterinarian, a sanitary inspector, and a laboratory technician, who are directly responsible for maintaining standards of quality for certified milk within a specified territory.

The American Medical Association has recently pointed out editorially the importance of certified milk in the entire line of progress of the dairy industry. "The value

(Continued on Next Page)

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★ *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
★★ *Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245*
N. Y. State Jour. Med., Vol. 35, No. 11,590
Arch. Otolaryngology, March 1936, Vol. 23, No. 3, 306-309

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(Continued from Preceding Page)

of certified milk has been great, even to those who have never used certified milk. Through the experience developed by methods of certification, the general level of sanitation in milk production has been raised. Producers of certified milk have furnished invaluable leadership in the dairy industry. At the same time the necessarily high cost of certified milk, which rendered it inaccessible to most consumers, made necessary the availability of a supply of milk that could be relied on for safety and yet could be supplied at much less expense."

Certified Milk—Pasteurized.—Although the long record of certified milk, as a safe product, is practically unchallenged, many sanitarians have urged repeatedly that it be pasteurized, merely as an added safeguard. Recently definite progress has been made in this respect. Following the annual meeting of the American Association of Medical Milk Commissions in June, 1935, the official methods and standards for certified milk were amended to permit producers of certified milk to pasteurize their product. Milk of certified quality may now be sold either raw or pasteurized in most localities, if properly labeled to distinguish it between the two kinds. The cap of the pasteurized milk must bear the legend "Certified Milk—Pasteurized."

The American Medical Association hailed this announcement of permissive pasteurization of certified milk with the statement: "Physicians desiring the highest quality of pasteurized milk for their patients will now be able to prescribe pasteurized certified milk; producers of certified milk will be able to offer their customers a pasteurized product; public health authorities will be aided in their program of universal pasteurization, and milk consumers will have a wider choice among desirable milk supplies." The American Public Health Association voiced its approval of the measure as follows: ". . . the action taken in favor of permissive pasteurization was a landmark in the development of certified milk, an episode which is as significant to dairy science and to public health as was the institution of certified milk itself in 1893."

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Those users of certified milk who prefer the added safety of pasteurization will welcome the information that the food value of pasteurized milk is virtually the same as the milk before it is pasteurized. Experiments show that the growth promoting and calcifying properties of milk, and the vitamins A, G, and D are unaffected by the process. There is some destruction of vitamins B and C in pasteurization, but these vitamins are supplied abundantly in certain other common foods and, therefore, the loss in milk is not regarded as important.

The Flavor of "Quality" Milk.—Delicious flavor is always associated with "quality" milk. Regardless of the particular grade or classification into which this milk may fall, the fresh, wholesome flavor of all "quality" milk adds infinitely to the consumer's enjoyment and appreciation of it. Each meticulous step in the care and feeding of the cow and in the handling of the milk itself contributes to the protection of that delicate, elusive flavor characteristic only of "quality" milk.

Summary.—1. Certified milk is so designated by medical milk commissions which establish optimal standards for care of the cows, for handling the milk, and for the bacterial content of the milk itself.

2. The American Association of Medical Milk Commissions has recently agreed to permit producers of certified milk to pasteurize their milk under certain specified conditions.

3. Pasteurization does not affect unfavorably those nutritive constituents present most abundantly in milk and which consumers must depend upon receiving chiefly from milk.

Dental Practice Acts: Dentistry Not Divisible into Professional and Business Departments.—The dental practice act of Wisconsin authorizes the state board of dental examiners on its own motion to make investigations and conduct hearings "in regard to the action of any licensed dentist and dental hygienist or any person who it has reason to believe is acting or has acted in such capac-

(Continued on Next Page)

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(Continued from Preceding Page)

ity within the state." Acting under this authority, the board served notices on Painless Parrmer, Inc., and A. J. Rust, a stockholder of that corporation, ordering them to appear before the board on a certain day "to give evidence." Rust and the corporation sought to restrain the board from holding the hearing, and from an adverse decision of the trial court they appealed to the Supreme Court of Wisconsin.

The constitutionality of reasonable regulations over the dental profession has been upheld, said the court. The creation of the state board of dental examiners and the conferring on them of the power of investigation and of holding hearings in certain matters specified in the statute are well within the constitutional requirements of an effective law. The legislature may enact legislation designed to accomplish the regulation of matters properly within the legislative field and may authorize an administrative commission, within valid limits, to provide rules and regulations for the administration and enforcement of the law within its expressed general purpose. This includes the right to conduct investigations and hold hearings pertinent to such purpose. The dental practice act in authorizing the board to hold hearings and to subpena witnesses violated no constitutional rights of the plaintiffs.

The plaintiffs contended, however, that the board was without jurisdiction to hold the proposed hearing because neither of them was licensed to practice dentistry. The fact that the plaintiffs do not actually engage in the performance of dental operations is not controlling, said the court. The law contemplates regulation of the profession to such an extent as to protect the public not only against the unprofessional conduct of licensed dentists but also against other persons who, by management or some other intimate relation, are in charge of those who are practicing dentistry under a single management. The method of operating a dental corporation, the securing of patients desiring dental treatment by licensed dentists, is a proper subject to regulation under a system which recognizes the practice as a profession. The contract for the dental work is consummated between the plaintiffs and the patient, the advertising by the corporation is also the act of the plaintiffs and in this manner they are holding themselves out as licensed dentists. In the case of *Painless Parker* v. *Board,* 216 Calif. 285, 14 P. (2d) 67, the court, in answer to the contention that there is a distinction between the practice of dentistry and the purely business side of the practice, stated:

> The law does not assume to divide the practice of dentistry into that kind of departments. Either one may extend into the domain of the other in respects that would make such a division impractical if not impossible. The subject is treated as a whole. If the contention of appellant be sound, then the proprietor of the business may be guilty of gross misconduct in its management and violate all standards which a licensed dentist would be required to respect and stand immune from any regulatory supervision whatsoever. His employee, the licensed dentist, would also be immune from discipline upon the ground that he was but a mere employee and was not responsible for his employer's misconduct, whether the employer be a corporation or a natural person. On grounds of public policy such a condition could not be countenanced. . . . .
>
> No one would dispute the right of any person to own a dental office equipment. The question most appropriate here is whether the thing owned is used for a given purpose by a person lawfully entitled to so use it. Ownership is not the absolute test of the right of use.

The notices that were sent to the plaintiffs, said the court, were lacking in fullness of detail and contained no careful statement of the charges, if any, which the board had under consideration. This fact, however, constitutes no warrant for the granting of injunctional relief. If and when the plaintiffs are accused of violating the provisions of the dental practice act, they will be afforded the opportunity of demanding a proper complaint in that proceeding.

The Supreme Court therefore affirmed the order of the trial court, which, in effect, dismissed the action instituted by the plaintiffs." (*Rust* v. *State Board of Examiners of Wisconsin* (Wis.), 256 N. W. 919.)—*Medicolegal Abstract, Journal of the American Medical Association.*

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Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this Journal write to its office requesting a copy of this leaflet.

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EDITORIALS†

CORONADO ANNUAL SESSION OF 1936

Proceedings of the San Diego-Coronado Annual Session.—San Diego newspaper comments, reprinted in last month's issue of CALIFORNIA AND WESTERN MEDICINE (pp. 537-540), afforded some views of the laity on happenings at this year's session of the California State Association at Coronado. The current journal presents, on pages 69 and 93, more detailed minutes of the House of Delegates, the Council, and the first general session.

Members of the Association interested in the policies adopted or emphasized at Coronado should read the official record of the transactions, to better acquaint themselves with what was done. This suggestion is made particularly to officers of component county societies, since they are the officials who may be called upon to interpret, from the standpoint of the new regulations, matters of conduct or ethics.

The Coronado-San Diego session measured up in excellent fashion to the successful and enjoyable meetings held in previous years at the Hotel del Coronado; and, as in former days, those who attended were recipients of the gracious hospitality from the San Diego County Medical Society, to whose members appreciation and thanks are expressed for the many courtesies extended.

* * *

California Medical Association's Change of Attitude on Health Insurance.—If one outstanding feature of the attitude of the Coronado House of Delegates, on matters of major policy, deserves mentioning, it would be this: that evidently a somewhat radical change of front concerning health insurance is quite apparent in the California Medical Association, as compared with points of view to which strenuous expression was given at Riverside in 1934, at the memorable special session in Los Angeles in 1935, and at the later regular session of the same year at Yosemite.

Members of the profession undoubtedly continue to maintain a deep interest in all plans which aim to better the conditions of hospitalization and medical service to those citizens who, because of insufficient income or other reasons, face serious financial and other problems when afflicted with unforeseen illness. On the other hand, there is a widespread and accepted belief that, because of the far-reaching social welfare factors involved, the solution of such medical relief problems as may be challenging both the profession and the laity, must come about through evolution and trial, and not by some of the revolutionary procedures advocated in the academic discussions of the subject. The delegated representatives of the profession, in meetings of the House of Delegates at Coronado, gave expression to their interest in methods of medical practice, through resolutions then submitted. Basing judgment on the votes they gave, there can be little doubt on how goodly a majority of the delegates stood respecting matters of further experimentation with expensive and unsatisfactory surveys, which thus far have led to little more than a startling dissipation of resources which the Association had slowly accumulated in previous years.

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† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column, which follows.

The conversations among delegates and attending members gave evidence, too, of the general thought now held by members of the profession, that, while there has been a tremendous agitation on paper, and in the minds of a small number of laity and physicians, concerning the amount and kind of medical and hospital care needed by a limited portion of citizens belonging to the lower-income bracket groups, the propaganda so carried on by some of the proponents of certain health insurance plans had gone to extremes; and that the remedies advocated were not adapted to achieving desirable ends for either the lay public or the medical profession. The Coronado delegates gave no indication of desire to pursue, at the expense of the Association's members, further will-o'-the-wisp or other surveys which, if really needed, might well be carried out through federal, state and local public agencies, rather than at the expense of our physicians, through their constituted organizations. It may be added, also, that, among the majority of the delegates, there was a strong feeling of regret that the delegates who were members of the previous sessions of the House of Delegates should have embarked the Association upon expenditures far in excess of those first proposed and estimated by the salaried survey staff; running, indeed, into so massive a sum of the Association's funds as to be in excess of fifty thousand dollars. Now, that so much has been spent, and there is so little to show therefrom, the realization of what is construed as hasty and ill-advised action becomes more and more apparent. Unfortunately, this change of mind does not bring back, into the Association's treasury, the thousands of dollars expended upon the adventure.

* * *

Practice of Medicine by Corporations, and Inclusion of Medical Services in Hospitalization Insurance Plans.—On the question of medical practice by a corporation—whether the corporation was owned or managed by laymen or members of the medical profession, making no difference—and also on the inclusion in hospitalization insurance plans of any type of medical work, such as x-ray or clinical laboratory service, the House of Delegates affirmed the stand taken by the American Medical Association at its recent Kansas City session; thereby placing on record the California Medical Association equally and unequivocally against such abuses.

Because of the much increased interest that is shown in hospitalization insurance plans, Assembly Bill 246, now having a place in the statute books of California as Chapter 386, and known as the Nonprofit Hospital Service Bill, is reprinted on page 109 of this issue. Many members of the Association may wish again to read this statute.

* * *

Why State Association Dues Were Increased.—The depleted condition of the State Association treasury, and the imperative need of having funds on hand to enable the organization properly to do its work, led the Council on Monday evening, May 25, to recommend that, for the year 1937, the state assessment be increased by five dollars. The recommendation was referred to the Reference Committee, and its report to the House on Wednesday evening also being in favor, and no delegations or delegates opposing, the assessment was ordered by unanimous vote. Some of the special expenses which it may be necessary to meet in the next two years are publicity campaigns to combat the initiative to open county hospitals of California to all citizens, without regard to their financial status, and the fighting of vicious public health legislation which will probably be brought forward at the next session of the legislature, convening in January, 1937; and also the carrying out of instructions from the Yosemite House of Delegates to place a qualifying certificate (basic science) initiative on the ballots in the state election of 1938, as a deterrent to additional examining boards in cultist and sectarian medicine. Appreciation of important issues such as the above explains the unanimous vote that was given to the change in the state membership assessment.

* * *

New By-Law on Disciplinary Procedure.—Because, during the last several years, two or three component county societies have had rather bitter experiences in their efforts to discipline certain members charged with having been engaged in unethical conduct, the Council of the State Association, realizing the need of an authoritative and exact procedure when disciplinary problems are involved, appointed a special committee to submit such a code to become a part of the by-laws of the State Association, and thus, automatically, also a part of the by-laws of every one of its component county units. This by-law will be incorporated in a new edition of the constitution and by-laws ordered by the Council. Officers and members of component societies are advised to read this new by-law and, in any contemplated disciplinary action, meticulously to govern themselves accordingly. It appears in the minutes of the House of Delegates printed in this number of California and Western Medicine (on page 80).

* * *

Proposed Amendment to the Constitution. A proposed amendment to the constitution, providing for safeguards against future undue expenditures, was the result of a recent sad experience in trying to fulfill instructions given at the Riverside and Los Angeles sessions of the House of Delegates and drawing on the State Association's funds to make the medical costs survey—with no top-limit on the amount of money so to be expended; and this proposed amendment* will come before the House of Delegates at the annual session in Del Monte, 1937.

* * *

All Features of the Coronado Session Were Up to Standard.—These comments on some of the happenings at Coronado are made especially for readers who do not wish to go through the maze of official proceedings as chronicled in the stenographic minutes.

The scientific exhibits were fully up to standard, and the commercial displays likewise happily placed. The near-by San Diego Fair, with its admirable Hall of Medical Science, provided additional social features. The dinner to President Peers saw the spacious dining rooms of the Hotel del Coronado filled to overflowing; and roomy rotundas and porches of the famous caravansary gave all present opportunities without end to meet old and new friends.

In conclusion, it may again be confidently stated that the Coronado annual session was, in its series of meetings of real inspirational value, in every way a great success; and those who were not in attendance may now turn their thoughts to the possibility of participating in next year's session at the Hotel Del Monte in Monterey County.

SUMMER COMMITTEE WORK IN COUNTY SOCIETIES — PREPARATION OF FALL PROGRAMS: COLLECTION OF COUNTY SOCIETY HISTORICAL MATERIAL

Summer Vacation Periods May Be Utilized Advantageously by Committees.—Most county societies discontinue regular meetings during the summer vacation months, the members coming back with increased zest and interest when the scientific meetings resume in the fall. Experience has shown such arrangement to be desirable, but experience has also demonstrated that county society committees, whose members may occasionally meet with one another during these breathing spells, can well plan work sure to enhance the society proceedings when, in the succeeding months, their reports will be submitted.

* * *

Program Committee Should Plan Its Work to Cover the Year.—One such committee whose members have a very definite responsibility is that "on program." A county society profits greatly if the committee on program plans a coordinated group of papers, assigning authors for the topics, so that certain themes of general or special local interest are developed in rounded and instructive form. Of importance, also, is the presentation of patients and specimens in such wise as to elicit stimulating debate; which again brings to mind the advantages to be derived in discussion, when authors submit, in advance of the meetings, their papers to two or three colleagues, with a request that they be prepared to discuss certain phases when called upon by the presiding officer. Hastily gotten together or impromptu medical programs occasionally do measure up to a good standard; but, in the long run, that society has the more valuable meetings whose program committee properly fulfills its functions by carefully planning in advance.

* * *

The Sadly-Neglected Historical Studies of Our State and County Associations.—Another committee which every county society should appoint is the Committee on History, the society secretary being an ex officio member thereof, because he is supposed to be in possession of the organization's records. It is a sad reflection on most of the county units, and even upon the state organization, that so little concerted and result-producing effort should have been made in the past to gather together old record books and other memorabilia which could be utilized as a basis for one or more historical papers for the local societies; copies always being sent, of course, to the State Association for preservation in its own archives. During the coming year the State Association Committee on History aims to start a consistent campaign that will promote the furtherance of historical investigation. The presidents of county societies which do not have history committees are requested to appoint those, or to ask for volunteers, who will start this work during these summer months. If nothing more were done than to find out whether a complete set of secretary records are still in existence, and where they may be found, that in itself would really be something. As a further suggestion, it might be wise to gather together all old record books of county societies and forward them to the State Association offices at San Francisco, where they could be kept for safe keeping and reference, as needed. If some such plan is not followed, then, as in the past, it will become only a matter of time when a local secretary may forget to turn over the old record books, and so allow them to be forgotten and irretrievably lost.

Our State Association was founded in 1856, but, as with so much else in the annals of California, the written records of early days in our possession are practically *nil*. Another instance of our lack of thought for the cultural-historical may be found in the interesting biographical notes, for the first time published in California and Western Medicine, in its May and June issues, concerning Dr. Joseph P. Widney, who in 1871 founded the Los Angeles County Medical Association, and is still active at the age of 95, in literary and other work. His part in the establishing of the largest county medical society west of the Mississippi, as well as his living presence was practically unknown to a majority of members of that large and important county unit. We must all agree that such indifference to the historical backgrounds of state and county organizations, which for almost a century have carried on the battle for proper standards of medical practice and public health in California, does not redound to our credit. Before it is altogether too late, then, let us set about, in earnest fashion, to take up this work, lest those who will follow in our footsteps may cast reproach upon our memories.

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* The amendment has a place in the minutes of the House of Delegates (page 92).

DEATH OF DR. CAMPBELL P. HOWARD, GUEST SPEAKER AT THE CORONADO ANNUAL SESSION

Among the distinguished guest speakers at the Coronado annual session was Dr. Campbell Palmer Howard, for years professor of medicine in the McGill University Faculty of Medicine, at Montreal, Canada, who presided at the clinical-pathological conference on Tuesday, May 26, and in such a manner as to elicit the admiration of all who were present to profit from his inspiring leadership. Having been so invited by the California Medical Association to come afar to this year's session and assume this duty, he met his obligation cheerfully, although sufficiently suffering physically at the time to keep to his bed, in the hotel, until almost the hour of his clinic.

Members of the California Medical Association, therefore, will learn with the greatest regret of Doctor Howard's sudden death several days later (on June 3), while on a visit with an old friend and colleague.*

The sympathy of the California Medical Association is here expressed to the members of Doctor Howard's family and to his colleagues on the faculty of McGill University.

PRACTICE OF ANESTHESIA: CALIFORNIA SUPREME COURT DENIES APPLICATION FOR REHEARING

On page 461 of California and Western Medicine for June, reference was made to the opinion handed down by five of the California Supreme Court justices, permitting, in essence, an unlicensed person to administer an anesthetic to some other person, and so to practice medicine, provided that the giving of the anesthetic "was and is done under the immediate direction and supervision of the operating surgeon and his assistants." A footnote to our comments stated that the Council of the California Medical Association had instructed its legal counsel, Mr. Hartley Peart, to make application to the Supreme Court for a rehearing. This was done, a brief being prepared in regular form. Lack of space prevents its publication in the current issue, but in a subsequent number we may again refer to the subject. On June 15, the application for a rehearing was denied by the Supreme Court, only Justices Langdon and Curtis voting in the affirmative. This means that the original opinion of Justices Waste, Conrey, Curtis, Langdon and Thompson of the California Supreme Court, sitting in banc on May 18 last, is now law.*

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 69.

EDITORIAL COMMENT†

THE PHYSICIAN AND THE DRUG TRADE

When Edison, Bell, Marconi, DeForrest, and the other great wizards of modern invention were developing their marvelous ideas, caution marked their efforts at every step, and proven safety and efficiency were their guiding principles. No incomplete, half-baked products were prematurely exploited for the sake of possible profit. Exactness and practical utility were accepted as basic requirements of scientific procedure.

Not so with many manufacturers of new drugs. Here, since nothing more than the unimportant issues of life and death are at stake, commercialism instead of proved merit seems to dominate the situation.

The question may be seriously raised whether present-day medicine is truly progressing, unless "progress" is used in its generic sense as meaning simply movement, which may be backward as well as forward.

Is medicine really progressing in the direction of accuracy, definite improvement in the remedial agencies employed? A glance at the record of the past few years would seem to make it very clear that the matter is at least a debatable one. And this without special emphasis upon the professional or economic phases of the subject. The trend along these latter lines is certainly not toward forward progress—even the confirmed optimist would admit as much. And, viewing the question dispassionately, a similar possible conclusion suggests itself with reference to the administration of drugs. Of course, we all recognize that improvements of far-reaching value have been made in the discovery of new remedies and methods of treatment; but these are usually so deeply buried under a veritable avalanche of commercial novelties and nostrums that the items of honest merit are often wholly obscured.

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* California and Western Medicine for June reprinted, on page 534, a brief newspaper item about his death. In this issue the proper obituary notice will be found on page 102.

* The full opinion was printed on page 537 of our June issue.

† This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

So rapidly has science announced new truths that the world has been utterly unable to assimilate them. In the frantic effort to keep pace, industry has suffered all but total collapse. And in the domain of living organisms a similar deluge of new truth has left biology, chemistry, and physiology floundering. Result: unwarranted conclusions, deductions immature, often misleading, sometimes even absurd, have poured forth in endless profusion, and the poor credulous physician spins around like a pup chasing its caudal appendage in his futile efforts to keep up with the procession.

New hormones, vitamins, and all kinds of fantastic panaceas, singly and in impossible combinations, released in ever-increasing number by laboratory technician and trade organization, have become perfectly bewildering in their number and variety. Today the profusion of remedies bears close resemblance to a tropical jungle, with its lush undergrowth concealing and smothering the occasional beautiful orchid.

No human mind is competent to remember and intelligently apply the resultant conglomeration. A heterogeneous mess of good, bad, indifferent, and actually harmful, is thrust upon, and threatens literally to engulf us. Anedemin, karicin, panodyn, jeculin, incretone, sedobrol, glykeron, pneumophthisin, ergoapiol, endocrine compound No. 4 (or 404), anti- this and pro- that, etc., *ad nauseam et ad infinitum.* These, cited at random, are a few, a very few, of the fancifully named products that we are besought and instructed, at the sacrifice of much of our office time, to bear in mind and perpetrate upon our confiding patients. And the crop seems inexhaustible. The total cost involved in printing, postage, samples, and salaries would undoubtedly make a considerable dent annually in our huge national debt. Somebody must pay this cost. Trade does not operate on a philanthropic basis.

Nor is the manufacturing purveyor the only culprit. When he stops to think, the physician must realize that the retail drug and department stores do more prescribing in every community than the entire medical profession. If the customer does not call for them by name, the smug irresponsible clerk, or smiling "saleslady," glibly suggests that aspirin is "good for" headache, bromoquinin for colds, or crazy crystals for constipation. Reliable figures regarding this evil would disclose some startling facts. Startling—but in most instances precisely in accord with the business office rackets of the trades people.

The question is a pertinent one. Whither are we headed, forward or backward?

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ORIGINAL ARTICLES

SLEEP DISORDERS IN CLINICAL PRACTICE*

PART I

By Franklin G. Ebaugh, M.D.†
Denver, Colorado

Disorders of sleep are among the commonest complaints which a general practitioner is called upon to treat. One writer estimates that 30 per cent of office patients have some type of sleep disturbance.[1] Our own experience in psychiatric practice would corroborate this, as most types of mental illness have some form of insomnia. It is now recognized that the treatment of those insomnias which are not toxic-organic, or environmental in origin, carries one into the midst of psychiatry, where a knowledge of personality function is essential. This is not as formidable as it may seem, for only a common-sense approach, free from both entangling theories and a complex vocabulary, is offered. We begin by asking "What is sleep?" The multiplicity of definitions reveal the fact that the exact nature of the process is unknown. The simplest definition, "the state of minimal normal activity, both organic and psychic," [2] tells us little, but has the advantage of not implying the action of a specific mechanism which might commit us to an unverified belief. It definitely implies that the entire body with all its systems participates in a normal process in a normal way; that any theory which regards sleep as an abnormal state is erroneous. That sleep is only a diminution of immediate activity was suggested by G. T. Fechner in 1860. Evolutionary studies, so fruitful in other fields, do not help us much here, even though we consider sleep as the result of a slow evolution of activity rhythm up the biologic ladder.[2,3] Purely psychologic studies on dissociation, reception of stimuli, dream-life, and somnambulism also offer no real explanation, however interesting some of the findings may be.

The literature is rich with painstaking observations of the behavior of the body systems during sleep.[1-42] Since most of these facts will not be pertinent to the present discussion, we will not attempt a summary except to discuss the effects of loss of sleep.

EFFECTS OF LOSS OF SLEEP

There is widespread among the laity a profound belief that loss of sleep predisposes the victim to "insanity," or to poor health. It is necessary to combat this belief vigorously at the outset, in order to carry on treatment rationally. Indeed, such reassurance, supported by well-chosen examples, may often allay much apprehension and make the remainder of the treatment simple, for some insomnias center about fear of the ill effects of loss of sleep. What are the effects of prolonged loss of sleep? It is difficult to find well-authenticated cases in human beings who are not experimental workers testing themselves under controlled conditions, because the reports given are too vague to be reliable. Kleitman voluntarily deprived himself of sleep for 115 hours without finding any marked biochemical changes.[27-29] Patrick and Gilbert, Robinson, McDougall and Smith, and Herz are other experimenters who report the results of loss of sleep for eighty to one hundred hours without any noticeable physical changes or decreased efficiency in the performance of varied mental tests.[13] So long as these men kept active they seemed to be as competent as they were during a normal day; it is difficult to determine the effect of their interest on their performance. It would seem from the evidence presented by these men that sleep is merely a luxury. Another group, Johnson, Swann, and Wiegand, however, conclude that the tests used do not adequately measure the undoubted changes which are present. A recent study, the case of Mr. Z., is interesting in that the subject voluntarily deprived himself of sleep for 236 hours (ten days).[25]

---

* From the Colorado Psychopathic Hospital and Psychiatry Department, University of Colorado.

† Guest-speaker address, read before the California Medical Association, Coronado Beach, May 27, 1936.

This man, like all the others reported, recovered promptly following a twenty-four-hour rest. Common experience also indicates that there is no so-called "sleep deficit," *i. e.*, that additional sleep is necessary to overcome the effects of prolonged loss of sleep. Instances of great productivity, combined with good health and longevity, may be cited to the patient; examples are Napoleon, John Wesley (the founder of Methodism), Thomas Edison, the inventor, and Pareto, the Italian sociologist. Several experiments in the reversal of sleep rhythm even point to the possibility of increasing the length of the working day by sleeping from 7 p. m. until 12:30 a. m., when sleep is supposed to be most efficient. It is claimed that persistence in this routine enables a person to become habituated sufficiently well to maintain a high level of efficiency.[43] It is suggested that in the future planned sleep to increase productivity may become common.

THEORIES OF SLEEP

The many theories of sleep are summarized as follows:

Cerebral Anemia (Alcmeon, fifth century B. C.; Blumembach, 1795; Mosso, nineteenth century; Howell, nineteenth and twentieth century).

Osmotic Theory supposes that water enters into the nerve cell as a result of the functional activity, thereby decreasing its excitability. (Rosenbaum, Devaux.)

The Dendritic Retraction Theory supposes that the contact between the dendrites is broken, and presumably associative brain processes are interfered with. (Duval, 1895; Cajal, Lugaro.)

Toxic Theories — Burton, "Anatomy of Melancholy." Pieron, the most able representative, believes in a "hypnotoxin." Others believe that lactic acid, cholesterin, CO_2, "leucomaines" (unoxidized products obtained from muscle), "neurotoxins," may be the specific agent involved.

Endocrine Theory—Salmon believes that sleep is a secretory function of the hypophysis.

Sleep Center Theory assumes a regulatory function exercised by the diencephalon. Supported by much experimental and clinical evidence.

Sleep as a function of different levels of the organism which are dissociable. (Kleitman.)

Sleep as inhibition. (Pavlov.)

KLEITMAN'S THEORY OF SLEEP

Kleitman correlates the following facts into a theory of sleep:

1. Sleep is an easily reversible activity of the highest functional centers of the cortex.
2. The inactivity is due to a functional break between the cortex and lower centers.
3. The break results in a decreased number of afferent impulses from the sensory organs, especially those of proprioception which may become fatigued.
4. In the absence of such fatigue, voluntary or involuntary relaxation may produce the same effect.
5. Diurnal wakefulness and sleep is a conditioned phenomenon.
6. Sleep can be correlated with a decrease in muscle tone and decrease in body temperature.

This view (Kleitman and Pavlov) is more attractive than the others presented in that it postulates cortical activity or lack of activity as an integral part of the sleeping process. We definitely feel that even though the actual physiology of sleep is not understood, it is a definite vital function engaged in by the personality as a whole, including all levels: structural, physiologic, endocrine, autonomic and cortical, and that most sleep disorders must be treated on the level at which they occur, *i. e.*, the highest integrating or psychobiologic level.

DISORDERS WHICH CAUSE SLEEPLESSNESS

We now turn to the various disorders which cause sleeplessness. A conveniently simple clinical classification is:

I. Environmental causes.
II. Psychobiologic causes.
    (a) Toxic-organic.
    (b) Personality malfunction.
        1. Psychoneurosis.
        2. Affect disorders.
        3. Content disorders.

Environmental Causes.—Environmental causes are important to keep in mind, because much patience and perseverance are necessary to discover these causative factors when investigating a case. It would obviously be unnecessary to treat a personality disorder when moving into a quieter apartment would cause cessation of the complaint. Besides noise of all descriptions, one considers the possibility of an unsatisfactory bed, mattress or sleeping arrangements; too much warmth, too heavy covers, odors, lights, drafts or other poor ventilation, improper humidity, and even altitude. Habituation is important in the latter case, as can be attested to by some who have experienced sleeplessness due to marked change in altitude. Temperature and humidity, likewise, offer problems of habit training, as exemplified by travelers in the tropics.[2]

Toxic-Organic Causes. — We emphasize the toxic-organic causes because every patient should have the benefit of a thorough physical examination to rule out the possibility of somatic pathology. Organic disease may cause sleep disturbance due to pain, distress, discomfort, tension, fatigue, toxemia; or from the secondary emotional effects, such as anxiousness, preoccupations, worry and feelings of depression. Such factors will be easily apparent in most diseases, but sleeplessness may be one of the earliest complaints in hyperthyroidism, the avitaminoses (beriberi, pellagra, Korsakow's syndrome), syphilis, including paresis, postencephalitis, arteriosclerosis, hypertension, cardiac disease, and cancer. Hypothyroidism is generally said to produce somnolence, but sleeplessness was found by Watkins in 6 per cent of his cases.[1,44] Insomnia, or a mild stupor, may be the presenting complaint in obscure cases of subdural hemorrhage weeks after the injury. Hunger pangs, mild hypoglycemia, and obesity may be causative factors. The latter often causes physical discomfort, but may also be a clue revealing too large an ingestion of an evening meal, or a relative myocardial insufficiency. Theoretically, fatigue causes insomnia by increasing the number of tonic discharges, thereby removing the optimum conditions for relaxation and sleep.[28] The ingestion of tea, coffee, tobacco, alcohol, or carbon monoxid are possible causes of insomnia in certain people. That there is wide variation in individual susceptibility is well established.[1,10]

Encephalitis and Sleep.—A few words on encephalitis are in order, since the observation of this disease has taught us much about sleep disturbance. The somnolence which may be found here is usually associated with lesions of the floor of the third ventricle; tumors and trypanosomiasis in this location also cause sleepiness. These lesions cause a paroxysmal type of somnolence, usually free from torpor and dulling of the sensorium if there is no increased intracranial pressure, which is indistinguishable from normal sleep, and from which the patient can be awakened to full consciousness (Fulton and Bailey). There is no rational treatment. The insomnia caused by encephalitis does not seem to harm the patient. Like the insomnia of other organic diseases of the brain, it is very difficult to induce sleep in these patients even with large doses of hypnotics. Reversal of sleep rhythm was a pronounced finding in the great epidemics of 1917 to 1920.

Narcolepsy. — Narcolepsy, the "condition of which the main or even the sole symptom is the occurrence in the daytime of paroxysmal attacks of a state closely resembling sleep,"[2] has been classified by Wilson[50] as follows:

1. Recurring diurnal attacks of sleep, (*a*) with attacks of tonelessness; (*b*) without toneless attacks.

2. Sleep attacks of continuous duration, day and night slumbers merging into each other, continuous sleep.

There is a third possible subdivision, namely, attacks of tonelessness without sleepiness that has been seen by Wilson. He believes that the narcolepsies are no more a single disease entity than the epilepsies, and the cause no more known. He groups the causes under the following: (1) traumatic; (2) psychopathological; (3) endocrine; (4) epileptic; (5) toxic infective (encephalitis); (6) circulatory; (7) tumors; (8) idiopathic. Treatment should be directed against removal of possible causes. Large doses of ephedrin may abort attacks, and are the best known remedy for the sleepiness. Benzedrin is now being offered as a more efficient drug, since the effects are supposed to be less toxic and more prolonged. (Narcolepsy, Prinzmetal and Bloomberg, J. A. M. A., 105, 2061, Dec. 21, 1935.)

PERSONALITY MALFUNCTION

The next large group of causes are those due to some degree of personality malfunction. These may be severe enough as to constitute a major psychosis, in which case treatment should be directed by a competent psychiatrist and usually in a psychiatric hospital. Those personality disorders which cause persistent symptoms, but do not disrupt the integrity of the individual or unfit him for ordinary society, are known as minor psychoses or part reactions. In the strictest sense, true insomnia is due to a part reaction. The more important types of part reactions seen are:

1. *Personality problems* as expressed by hysterical, hypochondrical, obsessive-compulsive, or neurasthenic complaints.

2. *Affect disorders,* in which the mood may be sadness and melancholy or elation.

3. *Content disorders,* with expressions of impure affects like fear, suspicion, anxiety, or generalized tension. These may border on the more malignant types with true delusional systems and hallucinations.[38]

PREFERABLE PLACES FOR TREATMENT

Before discussing treatment in detail, it may simplify the problem to mention that often a preliminary survey will be necessary to decide if the patient can be treated as an ambulatory case or as a patient in his own home, or whether removal to a general or psychiatric hospital is advisable. The principles of treatment will be the same in all cases, but the actual management will differ widely on this score. Each case must be decided on its own merits. Most "complaint disorders" or "part reactions" can be cared for through office interviews; the few persons whose ailments cannot be handled in this way should go to a sanitarium or psychiatric hospital, where the routine environment may be rigidly controlled. Major psychoses usually require psychiatric care in a hospital. Toxic-organic disorders must usually be treated in a hospital, where good nursing care is available. The severe deliria need care in a psychiatric hospital.

TREATMENT OF A PERSONALITY PROBLEM

The treatment of a personality problem begins with an extended study of the individual by means of the techniques taught by Adolf Meyer and his colleagues, after thorough physical, neurologic and laboratory examinations have ruled out all possible toxic-organic causes. Environmental causes will usually present themselves in the complaint and the history, and will suggest their own treatment.

The first step in this procedure is to investigate the complaint of the patient in every detail.[37,38] We ask: Exactly how does this patient suffer from sleeplessness? What are his sleep habits

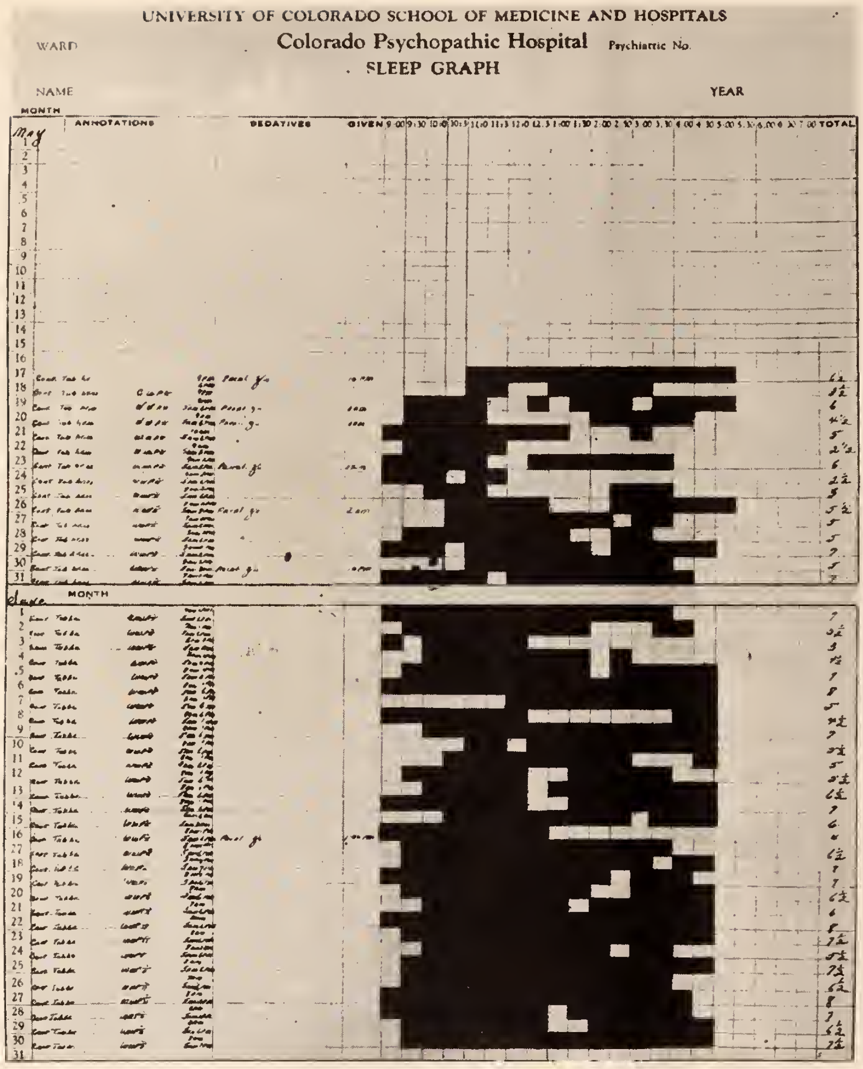

Chart 1.—Showing irregular broken sleep in a manic-depressive psychosis, manic type. Reliance on paraldehyd for short period, continuous baths and warm wet packs.

and how have they been disturbed? Is there early morning waking as in depressives, or reversal of sleep rhythm as in arteriosclerotics and some encephalitics? What are the disturbing factors? When did the complaint arise, and in what setting? What concomitant factors (social, financial, physiologic) causing unrest are present? What is the content? These leading questions and others which they suggest, when answered in quite specific detail, will usually reward the physician with a clear picture of the complaint. This type of investigation may be as precise and "scientific" as any other clinical or laboratory procedure.

We now proceed to find out more about the person who is suffering from the complaint. To this end we follow a systematic inquiry regarding the developmental history; the social and intellectual history; the religious, familial, occupational, and other special interests; the personal habits; the past personality and the family history, so that a broad picture of this patient in action is obtained. If necessary, corroborative information is obtained from relatives and associates. When all this is thoroughly done, one can trace the onset and gradual development of the disorder both in relation to the deeper causative factors present in the patient's personality as well as to the immediate precipitating factors. We attempt to reconstruct the moving drama of the whole person, breathing, acting, willing, working out his destiny as he may without artificial division into a biologic or psychologic body. We recognize an integrated personality consisting of many related part functions, any of which may be out of order and causing the whole to suffer. In order to control this maladjustment the facts of the life record must be organized in a trained, skillful manner, so that they will be useful for therapy, for each case is unique and will dictate the manner in which it is to be treated. Commonsense procedures are employed to help the maladjusted patient reorganize his manner of living in such a fashion that the complaint will disappear. After an affective *rapport* has been established between the physician and the patient, based on the latter's confidence and respect which have been enhanced by the impressive methodical investigative procedures outlined, one may employ *aeration* or *ventilation* of the conflict material presented, either by direct interviews or in unusual cases by means of special methods such as hypnosis and sodium amytal interviews. The important thing is that the patient is given a chance to discharge and bring out in the open all of those life experiences which have been causing him concern either more or less consciously. Where one discovers an unusual emotivity either from the history, the Jung-association test or the association-motor test, one may *desensitize* the patient to the painful situation by repeated interviews until he can face the unpleasant realities as frankly and as honestly as possible. This procedure is especially valuable in the symptomatic treatment of fear reactions. A planned *reëducation* is gradually worked out by mutual participation between the physician and the patient; as the latter develops a clear insight into the mechanism of his illness, he establishes new habits of response to noxious stimuli, and formulates an adequate industrial, social, recreational and activity program to insure future stabilization. *Reassurance* is given as needed, but dependence upon the physician is to be gradually discouraged, since it is the ultimate goal of the medical profession to make itself unnecessary. In addition, it may be advisable to treat the patient's relatives and reëducate them into new habits of response toward the patient.

The above procedures, to be carried out intelligently, require that every individual case be formulated in terms of its causative factors in such a way that those factors which can be modified are emphasized and become the center of attention. Factors which cannot be altered are recognized as such and the patient is trained to tolerate them. We have found such procedures to operate successfully in the large majority of our cases.

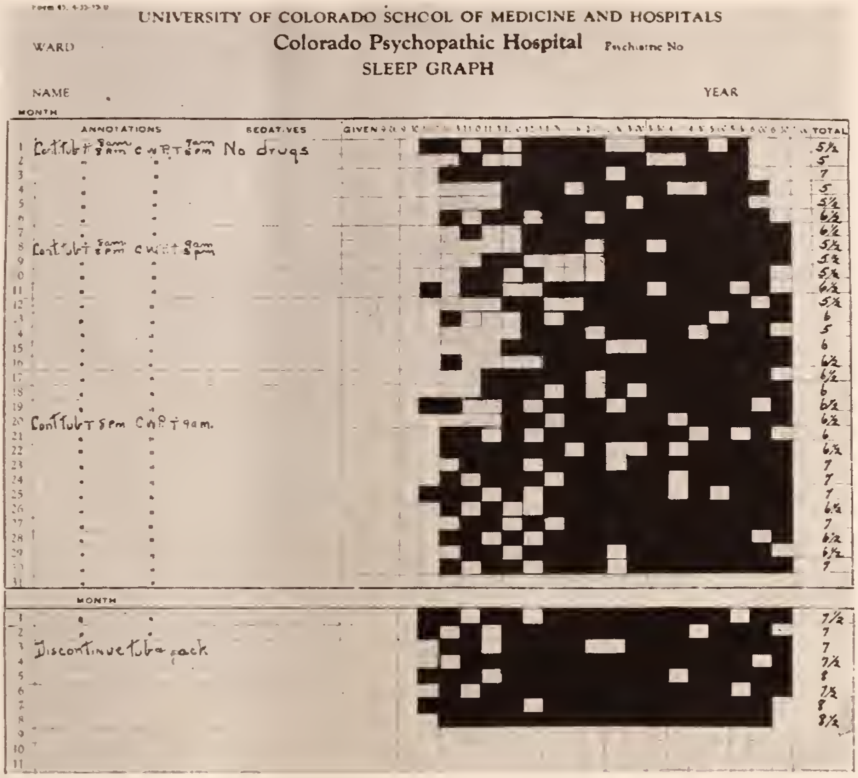

Chart 2.—Psychoneurosis, anxiety state, showing difficulty in falling asleep. No drugs used, continuous baths and cold wet packs employed.

PHIPPS' PSYCHIATRIC CLINIC CHARTS

There are few good classifications of the sleep disorders as such, so we will limit ourselves to pointing out those types of sleep disturbance which are somewhat characteristic of the disorders in which they occur. The charts devised at Phipps' Psychiatric Clinic are a valuable aid in describing those disturbances.[38,45] (See Charts 1 and 2.) We employ them at our hospital (Colorado Psychopathic Hospital) in all cases where the insomnia is difficult to control, in order to obtain more exact information about its nature. The nurses note on a special chart at half-hourly intervals whether the patient is asleep or awake. Special procedures or medication are also recorded, together with any pertinent information describing the nature of the sleep. Muncie[37] lists the following advantages and disadvantages of the chart:

1. It gives immediate information concerning the time and duration of sleep.
2. It gives an immediate correlation between sleep and hypnotic medication.
3. It leaves room for marginal annotations, and cross references to other parts of the history, *e. g.*, the behavior chart, the pulse and temperature chart.
4. It is concise, one sheet of the size of ordinary history paper giving space for two months, and adds little bulk to the history—a matter of no little importance.
5. Its use involves no change in nursing procedure.
6. The recording is easy and takes little of the nurse's time. It has several disadvantages:

(*a*) It is based merely on our half-hourly type of recording.

(*b*) It gives no information regarding depth of sleep.

(*c*) It gives no information concerning the condition and activity when the patient is not asleep.

The nurse's notes kept nightly on each patient have to supplement the record.

In general, relaxed posture, deep, regular respiration (and snoring), unresponsiveness to environmental stimuli, have to serve as criteria for sleep. Fairly uniform dependability is attained.

HOW CHARTS ARE USED

From these charts we can correlate certain types of sleep disorders with the type of disorder present. In the psychoneuroses, "complaint disorders," minor psychoses (merergasias), one may find difficulty in falling asleep, and intermittent sleep, often with prolonged desire to sleep in the morning (Type B). Here the content is the disturbing factor, since it is often of an anxious, fearful, obsessional or hypochondrical nature. In this group are the patients who utilize insomnia as an alibi for their failures; those who have fears regarding amount of necessary sleep; and those who fear insanity.

The affective disorders also present a characteristic picture. In the simple depressions one often finds no difficulty in falling asleep and sleeping until the early morning hours (Type A). Then the typical ruminations prevent a return to sleep. Suicidal preoccupations are often present. Together with sadness and melancholy, this type of sleep may be taken as pathognomonic of depression. An elated mood shows all types of disturbance without any definite pattern, and the patient may not sleep all night because "he is too busy."

Hallucinations of whatever type keep the patient awake because of stimulation. They may be pleasant or fear-inspiring. This is seen especially in schizophrenia.

In the toxic-organic disorders we see all types of sleep disturbances, since the content and the specific toxins make sleep very difficult. It is well known that many delirious patients do not sleep enough, so that the first requirement of treatment is to provide enough sleep.

(To be concluded)

THE PRESENT STATUS OF RENAL SYMPATHECTOMY*

By Thomas E. Gibson, M.D.
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INTRODUCTION.—The last few years have seen a great increase in knowledge of the functions and dysfunctions of the autonomic nervous system. Major developments have occurred in the field of surgery. A number of clinical syndromes, now recognized as due to dysfunction of the autonomic nervous system, have been signally benefited by sympathectomy, among which are Buerger's disease, Raynaud's disease, Hirschsprung's disease, scleroderma, essential hyperhidrosis, essential hypertension, cardiospasm, certain types of vesical paralysis, unexplained splanchnic pain, selected cases of chronic rheumatoid arthritis, and nephralgia. The three factors concerned in disease of the autonomic system relieved by sympathectomy are: (1) excessive vasomotor constriction, (2) pain, and (3) motor imbalance or dyskinesia. The application of sympathectomy in renal surgery rests on the assumption, first of all, that sympathectomy is without harmful effect on the kidney; second, that the operation is technically feasible; and third, that there are definite indications for the operation.

RENAL INNERVATION

The kidneys are innervated chiefly by the splanchnics (Fig. 1). The vasoconstrictor component far outweighs the vasodilator in importance. The renal plexus forms a network about the renal artery, which is readily amenable to surgical attack. The nerves to the kidney are sensory, vasomotor, and motor to the smooth muscle of the pelvis, ureter, and calyces. It is evident, therefore, that (1) vasomotor spasm, (2) pain, and (3) motor imbalance or dyskinesia, for which sympathectomy has been successfully performed in other parts of the body, are potentially present to produce disturbances in the kidney which may not always be accounted for on the basis of organic lesions.

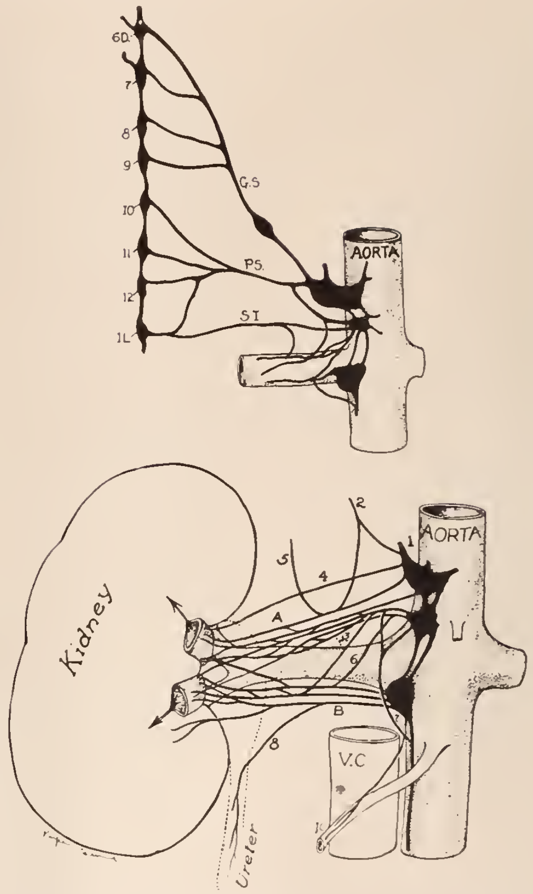

Fig. 1.—Schema of renal innervation (after Dambrin). The dorsal roots, sixth to twelfth, and the first lumbar, supply the kidney through the splanchnic nerves by way of the celiac ganglia. The renal plexus forms a network about the renal artery. The vein (shown by arrows) is not surrounded by nerves, thereby simplifying the surgical problem.

EXPERIMENTAL EVIDENCE

A vast amount of experimental work has been done to determine the effect of denervation on the kidney. Claude Bernard, as early as 1859, performed splanchnicotomy and noted the occurrence of polyuria. This work was subsequently confirmed by numerous investigators in connection with successful transplantation of kidneys, which insures complete denervation. Their results in general showed an increased secretion of urine of slightly lower specific gravity with relative lowering, but total increase in solids lasting from a few weeks to several months, explained on the basis of vasodilatation. These experiments showed that there are apparently no secretory nerves to the kidney, and that vasomotor conditions in the kidney, added to the chemical and hormonal action of substances in the circulating blood, are adequate to explain all variations and types of renal function. Other investigators who performed renal sympathectomy without transplantation came to the conclusion in general that the denervated kidney is sufficient to maintain life, even in the most severe exigencies that the normal kidney is capable of coping with, and that the operation is free from danger. Bilateral denervation in animals produced no impairment in health or renal function, and no late harmful effects were noted by the vast majority of investigators. In dogs, regeneration of the nerves occurred in from three to five months. Some experimenters found that the denervated kidney seemed better able to handle infection than the normal, as judged by urinary findings, and by the fact that more abscesses developed in the normal than in the denervated kidney following intravenous injections of attenuated staphylococcus aureus. On the other hand, certain observers found that repeated insults appeared to damage the denervated kidney more than the normal, the explanation being that loss of nervous control, with attendant vascular dilatation and stasis, lowered the resistance of the tissues to injurious agents, to which the organism was subjected repeatedly for long periods of time. Toxic agents, such as snake venom, mercury bichlorid, uranium acetate, and cantharides, injured the normal kidney less because of protective vaso-

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* Chairman's Address before the Urology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

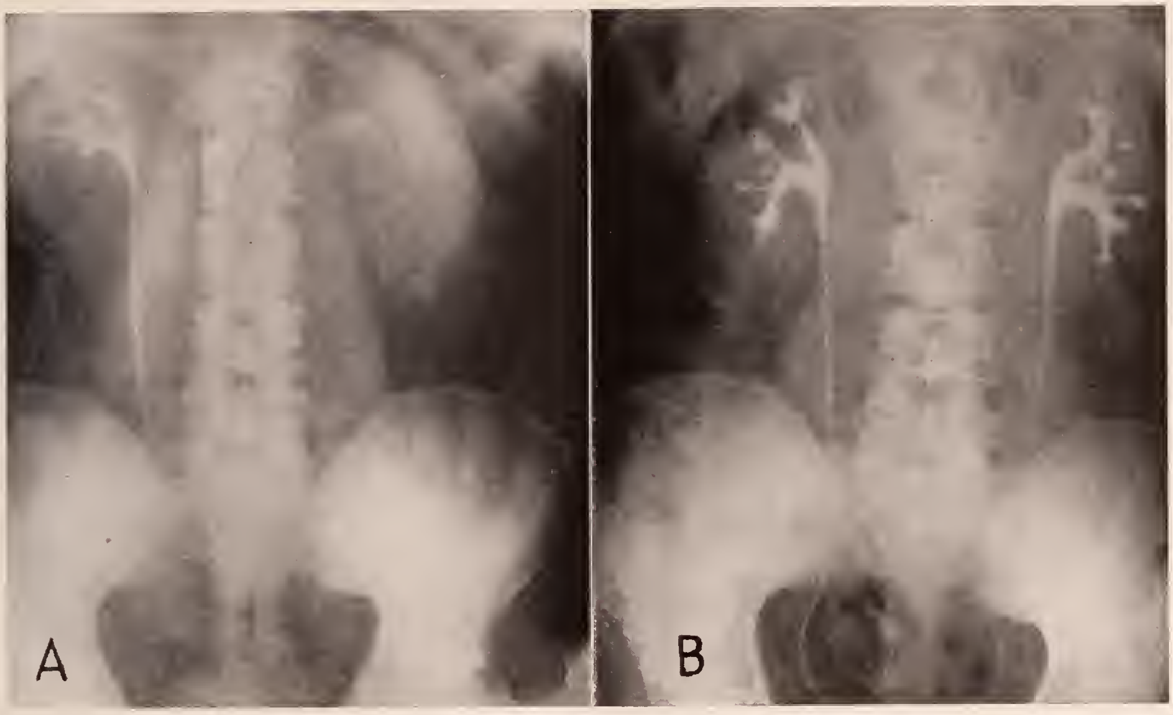

Fig. 2.—Case of sympatheticotonia: (A) Intravenous urography showing normal excretion on right, but complete failure of excretion on left, although increased density of kidney shadow shows that the renal parenchyma has taken up the excretion medium (neo-iopax). (B) Retrograde ureteropyelography with negative findings. Patient had severe renal colic, yet no organic change such as stricture, stone or irritating crystals could be found to explain the pain. The condition is apparently a spasm of the papillary ring muscles which prevents the excretion medium in the kidney from reaching the calyces and pelvis. Patient relieved without operation.

constriction. Furthermore, renal denervation had no effect on the time or amount of diuresis and loss of edema in the recovery of rabbits from uranium poisoning.

CLINICAL EVIDENCE

Clinical application of renal sympathectomy begins with Papin, who reported the first operation on a human being in 1921, and advocated it for the relief of pain due to chronic nephritis, small hydronephroses, and nephralgias of unexplained origin. Although the operation has not achieved great popularity, it has made, almost without exception, a favorable impression upon those who have had any appreciable experience with it. Increasing knowledge of the physiology of the upper urinary conduction apparatus has made it apparent that disturbances of motility (dyskinesia) may exist and cause pain in the absence of demonstrable organic pathology, and that even hydronephrosis and atony, or dilatation of the ureter, may occur in the complete absence of an obstructive factor. The term "sympatheticotonia" has been applied to these disturbances of innervation. Renal colic and nephralgias, which cannot be accounted for except on a functional basis even after the most thorough urologic investigation, fall in this category (Fig. 2). Many of these cases will respond to non-surgical treatment; but in those stubborn and inveterate cases which fail to respond, renal sympathectomy as a last resort is a justifiable procedure. Nothing is more striking and certain, according to several observers, than the relief obtained by operation in those suffering repeated, severe pain where no demonstrable pathology can be found. Sympathectomy has been advocated as a substitute for nephropexy. Nepropexy as an operation for relief of painful nephroptosis has fallen into disrepute with many clinicians, because of the frequent failure to relieve the patient's symptoms. Nephroptosis *per se* is not painful, even third degree mobility. Pain in these cases arises chiefly from interference with renal drainage. Relief of symptoms depends not on nephropexy, but on relief of obstruction existing in the form of adhesions, kinks, anomalous vessels, stricture of the ureteropelvic juncture which may be due to spasm (sympatheticotonia), actual inflammatory stricture, congenital narrowing or hypertrophy of smooth muscle at this point. If these factors are eliminated, nephropexy is of secondary importance. Renal sympathectomy, which can be easily done at the same time, is comforting to the surgeon because it makes doubly sure that pain will be relieved. Therefore, the procedure advocated in all cases of painful nephroptosis, regardless of whether some degree of hydronephrosis is present or not, is, first, to carefully dissect out the upper ureter and kidney pelvis, freeing it completely of surrounding tissues and ascertaining that the kidney has good drainage; and, second, to perform renal sympathectomy in order to make doubly sure of completely relieving the patient's symptoms. Nephropexy, then, may be omitted, except perhaps in cases of extreme ptosis.

Other conditions offering a more hopeful prognosis from the standpoint of renal sympathectomy are the oligurias and anurias of certain types of Bright's disease, as well as cases of reflex anuria

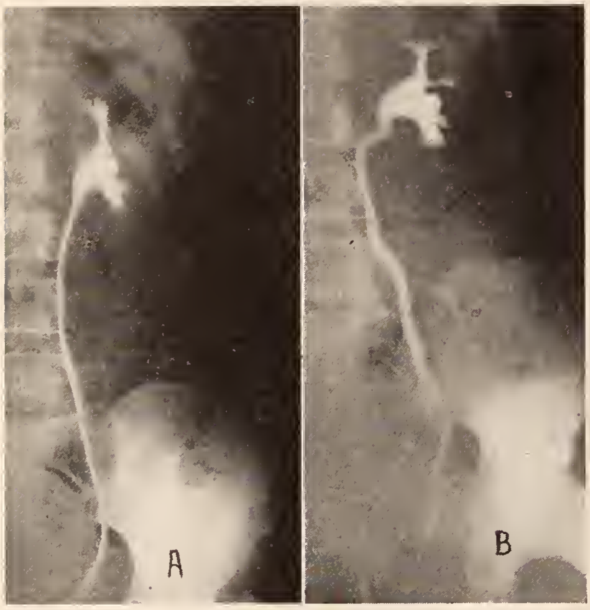

Fig. 3.—Prone (A) and vertical (B) pyelograms in patient unable to work for three years because of left nephralgia. Slight atony of left ureter. No ptosis. Pain reproduced by pyelography. Urine sterile. No relief from ureteral dilatations. Cured by renal sympathectomy.

which fail to respond to non-surgical treatment. Essential hematuria is, likewise, favorably influenced by sympathectomy when other treatment fails. It has been shown that renal sympathectomy has no effect on essential hypertension or on hypertension associated with chronic nephritis. Further investigation is needed to establish the value of renal sympathectomy in the various types of nephritis. The preliminary reports in this field do not appear to promise much except in the conditions noted above. Sufficient clinical evidence now exists to show that renal sympathectomy is not only without harmful effect on the kidney, but that even following nephrectomy the remaining denervated kidney is capable of carrying on normal renal function indefinitely, and is able to meet the demands of unusual emergencies, such as sickness, hard work, pregnancy, parturition, anesthesia, major surgery, and so on.

Personal experience, limited to twenty cases in which renal sympathectomy seemed indicated, points to this operation as one of the fine acquisitions of modern urology, to be resorted to, either alone or in combination with other essential procedures, in all cases of renal pain in which little or no organic pathology can be demonstrated.

In none of these cases mentioned was there any evidence of urinary infection, and the demonstrable pathology was slight, consisting of slight ptosis, beginning hydronephrosis, or some kinking of the ureter.

In reviewing the literature, it is singularly striking that the vast majority of cases subjected to sympathectomy have been in women. In my own series, nineteen out of twenty cases have been in the female. Why should the indications for sympathectomy show this disparity with respect to sex? I think the reason is to be found in the fact that not only nephroptosis, but also sympatheticotonia is more common in the female. The most puzzling urologic problems are to be found in the female, because so often the findings on complete urologic investigations do not seem sufficient to fully account for symptoms apparently renal in origin. Livermore (1934) has noted the preponderance of cases in women, and states that persistent pain in cases of slightly dilated pelvis and ureter is probably due to spasm, if infection and retention have been relieved. The neurotic is more susceptible to urinary tract spasm, hence more cases in women than men. Furthermore, the endocrine life of women is much more stormy and eventful than that of men. Spasm may possibly be due to many factors other than pure neurosis such as focal infection, allergy, disease of adjacent viscera such as colitis, appendicitis, gall-bladder disease, ovarian and tubal disease, and malposition of the uterus. Spasm may be due to irritating crystals in the urine or to toxins from some disturbance of metabolism. Relief depends upon removal of the cause, regulation of the endocrine system, treatment of neurotic symptoms, and, as a last resort, sympathectomy. Wharton's (1932) anatomical dissections revealed a connection between the sympathetic nerve supply of the ovary, testis, and ureter which would seem to give a sound neurologic mechanism to substantiate the hypothesis of a probable sexual foundation for certain cases of ureteral pain due to dyskinesia or spasm, in the absence of ureteritis and organic stricture. That they occur more often in women, according to Hepburn (1934) is because sexual emotional defeat occurs more often in women than in men. Usually, when a man has urinary

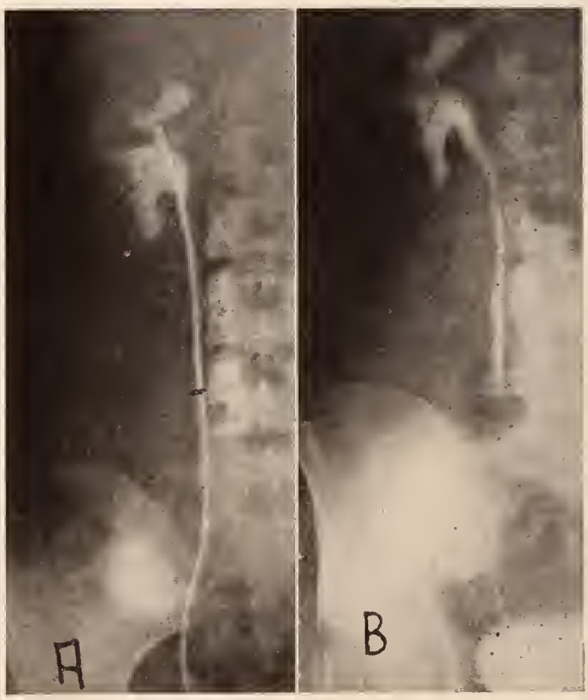

Fig. 4.—Prone (A) and vertical (B) pyelograms in patient who had right nephropexy performed eight years before. Satisfactory result of nephropexy, but pain had become increasingly excruciating. No organic pathology is evident except slight dilatation of upper major calyx. Patient completely relieved by renal sympathectomy.

symptoms a definite organic basis can be found to fully account for them. Hence, treatment offers something concrete to work on, with the expectation of completely relieving his pain without having to resort to sympathectomy. The only male in my series had a retroperitoneal lymphosarcoma encroaching on the renal pedicle and upper ureter. The ureter and pelvis were freed of adhesions and sympathectomy performed, with complete relief from further attacks of renal colic. The presence of lymphosarcoma, which eventually caused death, was not suspected until some time after the operation.

One of the most interesting cases in the series was a nurse who had been unable to work for three years because of pain in the left kidney region. A complete urologic investigation was done, with negative findings except for a slightly atonic ureter. Pyelography (Fig. 3) reproduced her pain. Ureteral dilatations gave no relief. Because of the insignificant findings operation was deferred for three years; but finally, in desperation, renal sympathectomy was done. This brought complete relief, and the patient has been able to work steadily at her profession ever since.

In another case nephropexy had been done ten years before. Pyelography (Fig. 4) showed a satisfactory result of the nephropexy, but the patient still had her pain. Sympathectomy was then done, with complete relief of pain. Such a case exemplifies the value of sympathectomy in certain cases in which nephropexy seemed indicated.

Another case of interest was a woman with right-sided pain who had an appendectomy without relief. A complete urologic investigation revealed right nephroptosis with ureteral kinking and slight hydronephrosis and pain reproduction. A combined operation, consisting of ureteronephrolysis, sympathectomy, and nephropexy was done, with complete relief of symptoms. A check-up eight years after operation showed the kidney to be in excellent position, with normal functional findings. This case is cited to show that sympathectomy produces no harmful effects upon the kidney.

Two patients had definite organic stricture of the ureter. Renal sympathectomy was done in these cases because of renal pain persisting after thorough dilatations of the ureter. Justification for the operation was found in the fact that the patients were relieved of pain. Such experiences illustrate the point that unexplained pain presumably due to sympatheticotonia may coexist with organic lesions in the upper urinary tract.

CONCLUSIONS

1. Renal sympathectomy produces no harmful effects on the kidney; it is surgically feasible either alone or in conjunction with other procedures; and in a number of conditions there are either relative or definite indications for its application.

2. Among the indications for renal sympathectomy are renal sympatheticotonia (spasm, atony, dyskinesia, hyperdynamic motility, adynamia) either alone or in association with definite organic changes (small hydronephroses, nephroptosis, painful chronic nephritis, painful adhesive perinephritis, essential hematuria, certain types of Bright's disease associated with oliguria and anuria, unyielding cases of reflex anuria, and possibly certain cases of stone forming diathesis).

3. Renal sympathectomy is recommended, in conjunction with other necessary surgical procedures, as an extra precautionary measure to make doubly sure of complete relief in any case of proved renal pain in which careful investigation reveals little or no demonstrable pathologic changes to adequately explain the symptoms.

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OCULAR SYPHILIS: ITS TREATMENT*

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Discussion *by H. Sutherland Campbell, M.D., Los Angeles; Julian N. Dow, M.D., Los Angeles; George H. Kress, M.D., Los Angeles.*

When one observes the therapeutic armamentarium in the office of a modern ophthalmologist, it shows very few necessary additions for the efficacious treatment of ocular diseases over the armamentarium of the year 1905, the year in which the Spirochaeta pallida was recognized as the cause of human syphilis. We use, in the main, the same small list of drugs—atropin, eserin, homatropin, zinc, silver, yellow oxid, etc.—that we were brought up to use twenty or twenty-five years ago, and have not found a new drug so specific for some one eye disease that we failed materially in not having it in 1905. Tuberculin is perhaps an exception, yet many of us feel that even in ocular tuberculosis we obtained good results without it.

SEROLOGY HAS HELPED OCULAR SYPHILIS THERAPY

In ocular syphilis, however, the therapeutic story is quite a different one. While potassium iodid and mercury were in free use before the present luetic therapy, the mode of administration was difficult, hasty, and insufficient as regards amount used. Diagnosis and treatment were based on very good clinical observation, but not subject to the check-up of present serologic methods. As a result the very distinct contrast in the number of cases of ocular syphilis observed in the material of the present day, and in that material on which I started my studies in 1912, is striking. At that time retro-orbital gummata, violent luetic iritis, fresh chorioretinitis, ocular palsies due to meningeal involvement, and numerous cases of both acute papallitis and of optic-nerve atrophies were common teaching material.

OCULAR SYPHILIS LESIONS SEEN LESS FREQUENTLY TODAY

Today we find it difficult to demonstrate to our Stanford Medical School students cases of syphilitic iritis, papillitis, or fresh chorioretinitis, and even interstitial keratitis is decreasing in frequency. In short, modern therapy, modern serological check-ups, modern social service activities, and the spread of information regarding the practical curability of syphilis, have changed the clinical picture. In addition to the varied, and in most cases effective, therapeusis in our hands, the ophthalmologist and syphilologist have learned to work together. No longer does the ophthalmologist prescribe a course of mercurial inunctions and atropin locally, to stop them when the eye for the time is well again. We rely upon syphilologists to take the case in hand and treat the individual for not only his present active syphilis, but so that he is syphilis-free regarding future danger to any of his organs before the treatment is stopped. It would be carrying coals to Newcastle to review here varied combinations used for the treatment of syphilis, no matter how expressed. Suffice to say that treatment of ocular syphilis is that of any syphilitic, with especial reference at the time of the eye infection, however, to the fact that the involvement of the eye in such a generally destructive disease as syphilis may call for certain precautions, and that involvement of certain parts of the eye has been shown to react better to one form of treatment than to another.

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* From the Department of Ophthalmology of the Stanford University Hospital, San Francisco.

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ARSPHENAMIN IN OCULAR SYPHILIS

Allow me to take up a few of these specific ophthalmic points. There is fear regarding the use of arsphenamin. This dates back to the use of atoxyl and its trial in syphilis. It would frequently produce a toxic amblyopia. I quote from Moore's "The Modern Treatment of Syphilis" in saying, "The condemnation accorded to it carried over unjustly to arsphenamin, was increased for a time by a misunderstanding of the mechanism of development of relapsing ocular lesions in inadequate treatment of early syphilis, and was in the process of gradually dying out when it was revived by the introduction of tryparsamid into the therapy of neurosyphilis." There are no true toxic arsphenamin reactions except conjunctival hyperemia. Very occasionally a superficial keratitis occurs, and I have noted an occasional photophobia lasting for one or two days. The Herxheimer reaction is of clinical importance only in optic neuritis or primary optic atrophy. It is rare and can be avoided by starting treatment with other than an arsenical. Personally, I would add that a central fresh chorioretinitis should be handled with caution, just as one does not care to obtain a focal reaction with tuberculin in such an instance but is not worried about an even severe flare-up on the part of the iris, ciliary body, or cornea. Once therapy is on its way, ocular relapse is not due to arsphenamin, but to too little arsphenamin.

In modern days the nontreated luetic is a rather rare visitor in the ophthalmologist's office. He comes usually with an iritis, and no manifestation of syphilis is more gratefully treated. One sees plastic adhesions and multiple papillomata of the iris disappear magically.

INTERSTITIAL KERATITIS

Interstitial keratitis is another story. Often opticians, optometrists, chiropractors, osteopaths, and even ophthalmologists, have been consulted, and yet the child has not received treatment. Treatment extending for a minimum period of two years, regardless of serological findings, does in a great majority of cases shorten the process, cause initial prompt amelioration of the photophobia and pain, possibly reduces the incidence of relapse and may decrease the frequency of involvement of the second eye. Carvill and Derby state that in sixty-two patients the second eye was involved in only two cases observed over a period of from two to five years when, in the absence of treatment, bilateral involvement would have been practically certain. These statistics, while undoubtedly accurate, are not supported by my own observations. In spite of intensive treatment I have seen the second eye involved in more than one-half the cases observed. Recently roentgen-ray treatment of interstitial keratitis has been highly praised by German investigators. I believe it may have use in those cases which have run their active course and whose dense, and still vascular, scars are radiated early, but I have had no personal experience with it. So much has been claimed for radium and roentgen-ray treatment in various diseases of the cornea, and so little has stood the test, that one may be rather skeptical. Artificially induced malaria and hyperpyrexia have been warmly praised, but their occasional danger, especially to the frequently marantic type of child, and the expense of the necessary hospitalization, speak against their standard use in interstitial keratitis. After all, in this particular manifestation of ocular syphilis, we obtained excellent results in 90 per cent of our cases in the days of mercurial inunction alone. I am not at all convinced that, except for some shortening of the process and amelioration of symptoms, mercurial inunction properly applied—I remember the children in Fuchs' clinic sitting around a hot stove until they perspired, before rubbing themselves vigorously—did not give just as good ocular results as any other method. Occasionally a vicious process is not influenced by any therapy, although I have only once seen both eyes lost in interstitial keratitis. Undoubtedly salvarsan will act more immediately upon the deeper-seated iritis, chorioditis, and optic neuritis which is almost always present.

PROGNOSIS AS TO VISION

No effect of a syphilitic infection is more totally ruinous to the individual than total blindness. Here, too, we see the less blind, whose hard fate is caused by tabetic optic nerve atrophy. We naturally are helpless in the face of a total or nearly total atrophy. No human remedy can ever be reasonably supposed to restore vanished nerve fibers. In the earlier stages, however, we no longer, as we did in Vienna in 1912, dismiss them as destined to total blindness. We refer them to the syphilologist, provided that central visual acuity is 5/10 or better and the field not too restricted. Here there is one chance in two of retaining useful vision. If the vision in either eye lies between 4/10 and 2/10, the prognosis is bad; and if less than this, there is practically no hope. Occasionally one will find a unilateral atrophic process, with good hope then of preservation of the better part of the vision of the then still normal eye, and I have seen patients with a central scotoma and little, if any, peripheral loss who, with prompt treatment, have remained stationary. If however, both eyes are equally far advanced and below 4/10 with corresponding field losses, the prognosis is bad, and this especially so if the process has been a rapid one. Intraspinal or intracisternal treatment has been the method of choice.

FEVER THERAPY IN OCULAR ATROPHY

Recently fever therapy in optic atrophy has found some enthusiastic supporters. Clark, in the last "Transactions of the American Ophthalmological Society," reports on a series of cases favorably influenced, the main conclusions being that there were no striking changes in the central visual acuity: that the Argyll-Robertson phenomenon disappeared in a small number; that vision in optic atrophy may be retained if treatment is started early enough. In cases resistant to intraspinal or intracisternal treatment, improvement may occur after malarial inoculation. Tryparsamid is to be mentioned in relation to cases of early paresis or tabes, in spite of the fact that in about 10 per cent of patients so treated ocular symptoms are met with. If they occur, it is either following the first treatment and may be a total atrophy of the optic or, with a series of treatments, consists of initial symptoms of "heat waves" in the vision or very slight dimness, and treatment must of course be immediately stopped. Fields must be carefully checked during the progress of the treatment. The risk involved from the eye standpoint may be justified in view of the good effect of this treatment in these types of cases. This was strikingly true in a patient with central scotoma, but good peripheral fields. Fever therapy, however induced, is a long and difficult process, needs most careful supervision, and can really be done well only by hospitalization. This in itself does not conduce to its use as a standard method applied to large clinical material. Many cases of tabetic optic nerve atrophy will not submit to such treatment. Unfortunately this is a disease without pain and without general symptoms. Ophthalmologists all appreciate the sometimes strikingly indifferent attitude of the tabetic with optic atrophy. He has no other complaints, is usually of stocky build and devoid of gastric crises, bladder symptoms, and ataxia, often of the ignorant type and cannot see why such a small affair as an eye needs such drastic treatment. This is only a personal observation, and please take it as such; but it is a fact that that is the sort of tabetic I have seen frequently. The highstrung, thin, rather tall tabetic with typical walk, and a cane in either hand, rarely suffers from optic atrophy.

IN CONCLUSION

In conclusion, the wise ophthalmologist will work hand in hand with the syphilologist, trust his judgment as regards frequency of dosage and length of treatment, and observe the eye frequently enough so as to be of moral support to the patient and of clinical help to the syphilologist.

Stanford University Hospital.

DISCUSSION

H. Sutherland Campbell, M.D. (1930 Wilshire Boulevard, Los Angeles).—The treatment of ocular syphilis is a matter too rarely included in a symposium on syphilis. It is a branch of the disease, the essentials of which are somewhat remote to many of us—as remote as are the varying, dimly-remembered eye-ground pictures occasioned by the different tissues of the eye which might be involved in the syphilitic process. These are visualized only by the ophthalmologist, and in similar manner the objective response to therapy is in a measure a closed book to other than those who are not only especially trained to examine the eye-grounds, but are also constantly applying the art.

When it is recognized that, of all eye involvements, only interstitial keratitis, or iritis, may commonly be visualized by us, and that "certain conditions call for advancement to therapy with a greater or lesser degree of caution," it becomes obvious that collaboration in the therapy of ocular syphilis between the syphilologist and the ophthalmologist becomes more of a necessity than an adventure.

The incidence of ocular syphilis in a thousand consecutive cases was shown by MacCormac to be as follows:

Primary	133
Secondary	172
Neurosyphilis	130
Cardiovascular	42
Visceral	14
Eye	55
Throat	112
Miscellaneous	342
Total cases	1000

So that in some sectors ocular involvement holds place over both the visceral and cardiovascular systems. It has been interesting to learn from this paper that a comparison of clinical findings in the eye, past and present, over a comparatively short period of time manifest a metamorphosis in visual characteristics which parallel those found in the skeletal and integumentary systems over a similar short period, inasmuch as the Charcots, nodular ulcerative syphilides, and massive sluffing gummas, so commonly seen in the early clinics, are today essentially rare. My last view of a group of these somewhat ancient lesions were seen at the Government Hospital Yard, in Marakeesh, French Morocco. The affected individuals were largely nomadic tribesmen, who had recently come from the outlying regions where modern therapy was unavailable. While this metamorphosis in the lesions of syphilis could be attributed to increased individual resistance, it is more prone to be due to the incidence of the arsenicals plus educational training, inasmuch as syphilis has been common to many generations preceding ours. And as race resistance is a slowly-acquired quality, it is hardly to be expected that such transformation in body lesions would occur within the space of some fifteen to twenty years.

In no other field in medicine can one find such a variety of conflicting opinions as in that of syphilotherapy. And ophthalmology has for long been concerned with the danger of the production of blindness by the use of certain arsenical preparations. Conflicting opinions are met with both as to the degree of danger in the face of certain conditions, also as to the drugs most responsible for adverse results; and this despite the stigma of blame still attached in definite measure to tryparsamid. The arsphenamins have more recently been proved harmless.

Reese, who in the face of an opposite majority contends that tryparsamid is equally as effective as malaria in the therapy of neurosyphilis, has to say in its defense "that the statement referred to in all reports, that tryparsamid is a menace to the optic nerve causing toxic amblyopia, necessitates comment. The literature reports that out of 1,254 patients treated with tryparsamid, 15 per cent complained of subjective and objective visual disturbances, with only two per cent permanent tract changes."

Beigelman, in a recent paper also emphasized the harmlessness of the arsphenamins. In his synopsis regarding the arsenicals in general he observes that, following the introduction of atoxyl, about one hundred cases of optic nerve atrophy were published. Later both salvarsan and neosalvarsan came under suspicion in connection with the many neurorecurrences, *i. e.,* optic nerve lesions following their use; but these reactions occurred only weeks after their use, and not immediately, as one would expect in a toxic reaction. They were inflammatory lesions and, therefore, due to infection rather than to a true toxic effect. The strongest proof of this lies in the fact that these neurorecurrences in the majority of cases disappeared or improved after continued therapy with the same arsenical compounds.

Young and Lovenhart have demonstrated that the toxic effect of the arsenicals upon the optic nerve is related to the molecular structure of the compounds, and that arsenicals with the amino group in a para position to the arsenic, such as atoxyl and tryparsamid, produced optic lesions in rabbits, while arsenicals with the amino group in a meta or ortho position to the arsenic, such as arsphenamin and neoarsphenamin, were totally harmless. Agreement in large measure with the present paper is shown in the statement that the answer to the question as to possible optic nerve damage, due to the use of salvarsan or neosalvarsan, is decidedly negative. Clinical experience with tryparsamid indicates that the drug has an affinity for the optic nerve, as reports on amblyopia following its use have been rather alarming. The dimness of vision met with usually occurs after the fifth dose of tryparsamid, and this clears entirely when the drug is withdrawn. It has been shown that the damage from tryparsamid may be particularly serious in extent and in permanence, when the drug is administered to patients with evidences of optic nerve atrophy. Its use, therefore, calls for careful and continuous ophthalmologic control. The important test is the perimetric study rather than the fundus examination, and once a definite change is found in the visual fields the drug must be immediately and completely discontinued. The resumption of tryparsamid, after a rest period of thirty days, as has been suggested by certain workers, is in general condemned by both ophthalmologists and syphilologists.

There are two fundamentals which may be gleaned from Doctor Barkan's very acceptable paper: first, the possibility of inducing immediate harm in certain eye conditions by means of an acute therapeutic reaction. This can readily be overcome by commencing therapy with a drug whose known immediate focal reaction is negligible Following Dr. Roy Thomas' observation regarding the safeness of iodobismitol in certain cardiovascular cases, which was given at a recent symposium on syphilis, clinical experiments were made in a few cases, demonstrating surface body lesions, and observations taken with respect to the immediate focal reactions from its use. These were found to be negligible, and the resultant healing steady and slow. It is possibly the safest drug in this respect; second, the possibility of blindness developing as a slightly delayed reaction following the use of certain of the arsenicals, *i. e.,* atoxyl and tryparsamid. In the latter case their use seems to be warranted only under the early and constant supervision of an ophthalmologist. In the event this is denied us, blindness as an end-result even in a very few cases would indicate that we are hardly justified in utilizing them, irrespective of the fact that better results might be obtained from their use in the larger number of cases.

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Julian N. Dow, M. D. (1228 Roosevelt Building, Los Angeles).—Doctor Barkan has very thoroughly discussed the treatment of syphilis from the ocular standpoint, and I can do little except endorse all he has written.

With the use of arsphenamin the duration of the acute uveal inflammations, due to syphilis, has been greatly shortened and seldom is any untoward reaction noticed.

Doctors J. J. Skirball and F. M. Thurman have written of observing twenty cases that have shown neuroretinitis and vitreous changes during the course of arsphenamin therapy. Recovery occurred after the administration of arsphenamin was discontinued. The condition recurred upon resuming the treatment and again cleared when discontinued. These changes were noticed by these authors in both early and late cases. In early cases, under my observation, this has never been observed, and the shortened course of ocular inflammation, when the case is treated with arsphenamin, is most gratifying. In all involvement of the posterior segment of the eyeball, caution is to be maintained at all times and frequent observations made as to the results following each injection.

There are about fifty thousand patients in the United States with primary optic atrophy due to syphilis. The time from the onset of the ocular symptoms until blindness occurs averages from two to three years. The ocular changes may occur as an isolated phenomenon in neurosyphilis, and often little attention is paid to these symptoms by the patient until quite late in the course.

David Lees reports 613 cases of neurosyphilis, of which forty-eight, or eight per cent, showed optic atrophy. In five hundred cases of neurosyphilis with tryparsamid, he reports that treatment was stopped in five cases only because of permanent ocular damage. In his series any visual loss that was observed occurred during the first four or five injections.

Twenty-one cases of optic atrophy which were treated, with tryparsamid and bismuth, had the progress of the optic atrophy arrested for from six months to five years.

I feel that ocular fields should be taken after each administration of tryparsamid, regardless of the fact that no apparent loss is shown after the first several injections.

As Doctor Barkan has stated, "the ophthalmologist can be of assistance to the syphilologist in the observance of local reactions whenever ocular involvement is present."

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George H. Kress, M. D. (945 Roosevelt Building, Los Angeles).—Few subjects have received more attention in medical literature than syphilology. The wide distribution of lues, with its varied and serious visceral manifestations must always make the disease a subject of intense study by all physicians, both in general and special practice. Because ocular syphilis, if improperly treated may lead to blindness, with all its sorrows, the proper treatment of luetic eye involvements is very important. As stated by the author, the present treatment of syphilis is comparatively recent, dating particularly from the discovery of the organism at fault, the introduction of the Wassermann test and the therapeutic use of the newer arsenicals and the bismuth preparations.

The reports in the literature of unfortunate experiences (with atoxyl as a cause of optic atrophy) naturally led to a prejudice to Ehrlich's 606 and the other arsenicals that followed when used in the treatment of ocular syphilis, which even today exists here and there. Clinical and statistical evidence, however, go to show more and more that the arsphenamins should not only be used in ophthalmologic practice, but that in luetic uveitis and interstitial keratitis they should be resorted to early, and continued after the acute ocular symptoms have subsided, in order to prevent avoidable relapses. The use of the bismuth and mercury preparations as adjuncts is nearly always in order, the choice of preparations and their use in relation to the arsphenamins and other therapy being left largely in the hands of the syphilologist, with whom, as Doctor Barkan has stated, the ophthalmologist should be in close touch when patients suffering from severe ocular manifestations of lues are under joint care. The author has called attention to the happier results with the arsenical and other therapy, instituted and developed in the last twenty-five years, and we can only emphasize the importance of what he has told us; for not to proceed along the lines outlined by him leads only to deplorable end-results, which to the patients who become blind or near blind, are little less than tragedies.

TUMORS ON THE SPINAL CORD: THEIR DIAGNOSIS*

AN ANALYSIS OF FIFTY-NINE CASES

By O. W. Jones, Jr., M.D.
and
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Discussion *by Carl W. Rand, M.D., Los Angeles; Cyril B. Courville, M.D., Los Angeles.*

THE object of this paper is to present the outstanding clinical features noted in a study of the last fifty-nine cases of tumor of the spinal cord seen at the University of California Hospital.

The first successful removal of a tumor of the spinal cord was accomplished by Sir Victor Horsley in 1887. Since that time our clinical knowledge of the subject has broadened, and many diagnostic aids have been established, the most valuable of which are the spinal puncture (simplified and perfected by Quincke in 1891) and its adaptation by Queckenstedt, in 1916, to the study of the hydrodynamics of the spinal fluid. Of these the Queckenstedt test is the more important. Its application permits recognition of partial or complete obstruction in the spinal fluid pathways.

Froin, in 1903, associated xanthochromia and coagulation (with or without an increase in the cell count) with a mechanical obstruction to the spinal fluid pathways. Seven years later, however, Nonne demonstrated that in such lesions an increase in the amount of globulin may be the only alteration.

The cisternal puncture (Ayer, 1920), and the combined cisternal and lumbar punctures offer a method of visualizing the altered hydraulics, and permit chemical and physical studies of the fluid removed from above and below the lesion. In 1923, Cushing and Ayer reported xanthochromia, as well as alterations in the amount of protein, both above and below tumors of the cauda equina. This finding deserves special mention because it is usually believed that xanthochromia occurs only below the level of the tumor.

Roentgenographic studies frequently demonstrate significant alterations in the vertebrae, such as narrowing of the pedicles, enlargement of the bony spinal canal or intervertebral foramen.

Lipiodol as a *localizing agent* (1922) has proved to be of great advantage in certain cases.

In 1931 we noted that bilateral compression of the jugular and other cervical veins enabled us to differentiate between radicular pain produced by gross intraspinal, space-consuming lesions, and extraspinal pain of radicular type.

In the differential diagnosis of tumors of the spinal cord it may be necessary to employ one or all of the diagnostic aids mentioned above.

AUTHORS' STUDY OF RECENT CASES

In our study of the last fifty-nine cases of tumor of the spinal cord and cauda equina at the University of California Hospital, we noted certain clinical peculiarities and characteristics associated with the various pathologic types of tumor. It is the object of this paper to present certain outstanding clinical features of the various types of tumor, according to location and pathologic classification.

The early diagnosis of tumors of the central nervous system is of utmost importance. Little can be accomplished by the surgical removal of a benign tumor if permanent damage to the cord has already occurred. In the group of patients with benign encapsulated tumors, 79.5 per cent received an excellent result. The average duration of partial or complete compression of the spinal cord was five and one-half months. Of the 20.5 per cent in whom the results were not satisfactory, the average duration of complete or almost complete loss of motor and sensory function was two years and four months.

Tumors arising from the spinal cord, meninges, nerve roots, and dura give early evidence of their presence. In our series, regardless of the type or location of the tumor, *pain* was the most common and usually the initial symptom. It often was present for a number of years before neurologic signs appeared. The pain often simulated that of other disorders, and the patients complained of rheumatism, neuritis, sciatica, lumbago, sacro-iliac strain, and abdominal symptoms. In the early stages the pain was invariably localized. In most instances it later developed into a combination of localized and radiating pain. When radiating pain appeared early it was unilateral, but eventually became bilateral late in the course of the disease.

Sensory alteration, motor weakness or disturbances of the sphincters were unusual as initial symptoms. In all cases the symptoms and signs could be explained on the basis of a single, progressive, space-consuming lesion.

The pathologic type and clinical peculiarities of the tumors in the series are of great interest.

HOUR-GLASS TUMORS

The first group is composed of the so-called hour-glass type of tumor. These tumors have an intraspinal portion connected by a small neck with an extraspinal enlargement. In our cases the connection occurred most frequently through an intervertebral foramen, but occasionally through an interlaminal space. It is generally accepted that hour-glass tumors are rare, yet there were fifteen such cases in this series.

The most important, single, subjective complaint in this group was localized pain, the duration of which varied from two weeks in one case to ten years in another. No pain was present in four cases. In general, the neurologic signs appeared relatively late and were characteristic of compression of the spinal cord.

Palpation of the extraspinal portion of the tumor was possible in the cervical region, and occasionally in the thoracic and lumbar regions. Roentgenograms of the spine proved extremely valuable. In addition to anteroposterior and lat-

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eral exposures, special views should be taken to show the intervertebral foramina. Enlargement of the latter structures frequently was demonstrated as well as erosion of transverse processes, laminae or dorsal surfaces of the bodies of the vertebrae, or a shadow cast by the extraspinal portion of the tumor itself.

In the fifteen cases the commonest pathologic types were neurofibroma, dural endothelioma, and hemangio-endothelioma. There was one osteochrondroma.

A preoperative diagnosis of this peculiar method of growth is important. In the absence of positive neurologic findings, a diagnosis of intrathoracic tumor has been made, and the intrathoracic portion of an hour-glass tumor removed without appreciating its character. Such mistakes have resulted in hydrothorax from a tearing of the dura with the escape of clear cerebrospinal fluid. The majority of hour-glass tumors are slow-growing and many can be enucleated.

INTRAMEDULLARY AND EXTRAMEDULLARY EXTRADURAL TUMORS

The intramedullary tumors in the proved cases were gliomas. In each instance they were very extensive and demonstrated the characteristic infiltrating properties, making complete surgical removal impossible, although large portions sometimes were removed with improvement. Pain of the same type as that found in other cases of tumor was the initial symptom. The average duration of pain was a year and a half, but in one case pain was present for six years. In one case laparotomy had been performed because of the severity of the referred pain.

The differential diagnosis between intramedullary tumors and extramedullary intradural tumors is difficult as a rule. In our cases, however, one differential point proved to be of value.

In the *extramedullary* tumors there was usually a clear-cut history of gradually increasing compression of the spinal cord. In these cases the sensory level was almost always sharply demarcated, and tended to be more pronounced in the distal part of the lower extremities than in the higher segments corresponding to the level of the lesion.

In the *intramedullary* tumors the reverse was true—that is, the maximum sensory loss corresponded to the segments of the cord immediately involved, while the sensory alteration in the distal parts of the extremities was not so marked. In addition, in an intramedullary growth, the sensory findings tended to fade off above the level of the tumor in a more or less indefinite fashion.

TUMORS OF THE CONUS MEDULLARIS

Involvement of the conus medullaris by either an intramedullary or an extramedullary tumor led, in all instances, to early involvement of the sphincters and varying degrees of impotence.

TUMORS OF THE CAUDA EQUINA

In this study, tumors of the cauda equina formed the most interesting but the most difficult diagnostic problems. Many of the old-established diagnostic principles were further emphasized, and new diagnostic points were revealed.

The majority of the primary tumors of the cauda equina are slow-growing and usually benign. Because the cauda equina is made up entirely of nerve filaments, the first symptom resulting from compression of the nerve roots is *pain,* which may be constant or intermittent, dull or knife-like. It may remain localized and is invariably present for many years before motor or sensory disturbances become evident. The initial onset of pain is commonly associated with a mild form of trauma or back strain. Its distribution and character may be such as to simulate lumbosacral or sacro-iliac disease. It frequently is aggravated by coughing, straining, or exertion. The pain is likely to come on at night, some hours after retiring. It is relieved by standing up and walking about, and the patient soon learns that he can be relatively free from pain if he sleeps in the sitting position.

Of the fourteen tumors occurring in the region of the cauda equina, in this series, four pathologic types deserve mention: (1) neurofibromata; (2) dislocated nucleus pulposus (chordoma); (3) epidermoids; and (4) large, soft, dural endotheliomata.

1. *Neurofibromata.* — These are slow-growing. Because these tumors arise from the sheath of a nerve root, radiating pain is the first and predominating symptom. In our patients such pain was present for as long as seven or eight years before the appearance of positive neurologic signs. Initially, it was unilateral and finally bilateral. In each instance, bilateral compression of the jugular veins reproduced the characteristic pain.

2. *Dislocated Nucleus Pulposus or Intervertebral Cartilage.* — That portion of the notocord which remains in the center of each intervertebral fibrocartilage is known as the nucleus pulposus. It is a highly elastic structure. If severe force is applied to the spine, a tear of the annulus fibrosus or a break in the intervertebral cartilage may result in a herniation of the nucleus, which may take place in one of several directions. Dorsal herniation frequently results in compression of the nerve structures. In some instances, portions of the hyaline cartilage of the disk may become separated and dislocate dorsally producing comparable effects. In either instance, repeated mild or severe trauma causes further dislocation with increased pressure on the adjacent nerve tissue.

In this series there were four cases of dislocated nucleus pulposus. The symptoms were intermittently progressive, and remissions were not uncommon. Pain, the initial symptom in each case, was of the local type and in one case was present for thirteen years before the appearance of neurologic signs, though the average duration was five and one-half years. In every case the pain simulated mild arthritis, sciatica, lumbosacral or sacro-iliac strain. In three cases lipiodol localized the level of the lesion and cast the characteristic x-ray shadow of dorsal dislocation.

3. *Intradural-Epidermoid and Dermoid Tumors.* Tumors of this type are rare. In the literature they are classified as teratoma, teratoid and epi-

dermoid cysts, cholesteatoma and dermoid tumors, according to the number of germ layers present. They may occur at any point along the midline from the cephalic to the caudal extremity. Those in our series involved the cauda equina. The complex embryologic development of the rectum, anus, and caudal end of the spinal cord and its appendages, lends itself to the development of such tumors in association with bony anomalies; such association was found in two of our cases.

The delayed appearance of neurologic signs is best explained by the slow-growing character and soft content of these tumors. In one of the four cases pain was the only symptom over a period of forty-two years. The tumor measured 15 by 4 centimeters. In each instance the tumor was composed of soft, cheesy material, cholesterol crystals, and hair, the greater portion of which was encapsulated.

The reproduction of typical pain on bilateral jugular compression was present in three of the four cases. In two instances severe pain was reproduced on attempted spinal puncture. The explanation of this was found at operation. The dural sac, being completely filled by the tumor, had compressed the nerve roots against the dura so that they were directly stimulated by the needle. The production of severe pain on spinal puncture is, therefore, suggestive of a tumor which prevents dislocation of the nerve roots.

Because of the slow growth of these large, so-called giant tumors of the cauda equina, definite bony alterations can be demonstrated by x-ray examination. These alterations consist in narrowing of the pedicles, thinning of the laminae, and erosion of the posterior surfaces of the bodies of the vertebrae with resultant enlargement of the bony spinal canal.

4. *Dural Endotheliomata.*—Many of these tumors grow to enormous size and, because they are soft in consistency, produce pain for many years before the appearance of positive neurologic signs. In one instance a tumor of this type measured, before removal, 10 by 5 centimeters. In this case there were no positive neurologic findings; pain was the only complaint. The clinical and x-ray findings in these cases were comparable to those of the large dermoid tumors.

COMMENT

It is evident from a study of the cases in this series that *pain* as the initial symptom is most common. It may be localized or radiating in character. In patients in whom pain persists regardless of the treatment employed, the possibility of tumor of the spinal cord must be considered.

Early diagnosis is essential. End-results bear a direct relation to the duration and degree of motor and sensory impairment, as well as the pathologic type of the tumor.

For use in a differential diagnosis, various diagnostic aids are of value. The simplest of these is that of compression of the jugular and cervical veins. This test was applied in the last twenty-six cases in this series, and gave a positive reaction in 50 per cent. The frequency with which tumors of the conus medullaris and cauda equina simulate orthopedic disorders warrants the recommendation that this test be employed routinely in orthopedic examinations in which localized or radicular pain is present.

The test is performed readily in an office and should be carried out with the patient in both the sitting and recumbent positions. The patient is placed in a comfortable position and, when free from pain, compression of the cervical veins is made as in the familiar Queckenstedt test. As the intracranial and intraspinal pressure above the level of the block is raised, the characteristic pain may be produced if the tumor is capable of being displaced sufficiently to cause traction on or irritation of a nerve root. Although most commonly the pain is reproduced by compression of the jugular and other cervical veins, in certain instances (depending presumably on the direction in which the tumor dislocates most readily) such pain may be experienced only on sudden release of the jugular compression.

Though radicular pain is commoner in cases of tumor of the cauda equina, the value of the test is by no means limited to tumors of this region, but has proved of differential value in lesions of various pathologic types involving the cervical and thoracic portions of the spinal cord.

University of California Hospital.

DISCUSSION

Carl W. Rand, M. D. (523 West Sixth Street, Los Angeles).—I have enjoyed hearing the résumé by Doctors Naffziger and Jones of their experiences with spinal cord tumors at the University of California Medical School.

It happens that one of their cases, an hour-glass tumor of the neurofibroma type, subsequently came under my observation. The original tumor was operated upon by Dr. Howard Fleming in March, 1932. By July, 1934, there were signs of recurrence of the growth, and the patient was once more operated on September 4, 1934. The pathologic report again was a neurofibroma, and comparison with the original tumor slides showed the tissue to be identical. The tumor could only be partially removed. His remission lasted until December, 1934, when, for the third time, he was operated upon. Large portions of the tumor were again removed. The pathologic report did not indicate beginning malignancy. Another period of improvement lasted for about eight months. Upon return of paraplegia he was operated for the fourth time on August 8, 1935. At this sitting, a tumor much larger than before was found. It was removed as well as could be. The pathologist reported this material much more cellular than that removed on previous occasions, and stated "the tumor should no longer be considered neurofibroma, but neurofibrosarcoma." While patients harboring tumors of this type are usually cured by the first operative removal, this case, observed for approximately three years, shows that malignant changes may occasionally occur.

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Cyril B. Courville, M. D. (312 North Boyle Avenue, Los Angeles).—This survey presents within a brief scope the essentials of the pathology and symptomatology of a group of the most hopeful surgical lesions of the central nervous system. It is indeed a tragedy of major rank in our day to permit a benign, encapsulated and enucleable dural tumor to pursue an uninterrupted course to the point of advanced and irrecoverable damage to the spinal cord. It is a tribute to the intelligence and alertness of the general practitioner that this sort of episode is now of rare occurrence.

The opportunity to study the records of fifty-nine cases of intraspinal tumor is not given to all of us, and the authors have discharged well their obligation to the profession by reporting their observations. So large a percentage of hour-glass tumors is somewhat surprising even to some of us who perhaps should be better informed. If these figures are representative, it behooves the roentgenologist to pay more attention to the relative size of intervertebral foramina in the suspected region. That we do not scrutinize critically enough the radiographs of the spine in suspected intraspinal tumors has been impressed upon me in recent years. Enlargements of the foramina, erosion of the pedicles or the lamina, and calcification or ossification within the tumor, are all too often overlooked.

Three clinical observations have proved to be helpful in my experience in the diagnosis of intraspinal tumors. The first one is now quite widely recognized, *i. e.*, the slowly and progressively ascending sensory level which may mislead the observer as to the true location of the tumor until late in the course of the condition. A second symptom, occurring typically in the ependymogliomas arising in the cervical segments of the cord, is the impairment of thermal sense in the upper extremities which stimulates the findings in syringomyelia. A third observation of interest concerns tumors of the roots of the spinal nerves with pain as the outstanding symptom. This pain is often radicular in character, occurring in spasms which become more and more frequent and severe. If sensation is tested in the area affected by the pain during the episode or immediately afterward, a typical radicular area of hypesthesia may be outlined. The finding of a xanthochromic fluid and evidences of block on the Queckenstedt test usually helps in clearing up any doubtful situations.

PITUITARY GROWTH FACTOR*

SOME CLINICAL CONSIDERATIONS

By E. Kost Shelton, M.D.
Santa Barbara

Discussion *by H. Lisser, M. D., San Francisco; Lyman A. Cavanaugh, M. D., Santa Barbara.*

THE growth factor was the first secretory influence to be suspected and verified in the pituitary gland. In 1885, Pierre Marie described, "a peculiar, noncongenital hypertrophy of the upper, lower and cephalic extremities," which he termed acromegaly. Two years later Minkowski suggested the rôle of the pituitary in this process. Marie, who was soon won to this point of view, felt that the disorder must be due to underfunction of the organ, if it was not a problem of intoxication rather than of aberrant secretion. His conception was natural since, at autopsy, most of the cases recorded proved to have destructive tumors in this area. While Sir Arthur Keith was first to recognize an enlargement of the sella turcica in relation to gigantism, he held much the same view as Marie regarding the processes involved. Massolongo (1892) not only argued that acromegaly and gigantism were one and the same disorder at different periods of life, but, through careful histological studies, suggested that both were the result of excessive, rather than of diminished, secretion. By the turn of the century, Hutchinson's findings of definite pituitary hyperplasia in forty-four out of forty-eight autopsied acromegalies left little doubt on this point.

EARLY ATTEMPTS AT HYPOPHYSECTOMY

As Futcher tells us, "further knowledge of the pituitary mechanism could only be gained through experiments on the gland and the latter's fortified position in the center of the head thwarted many investigators." Early attempts at hypophysectomy, by Paulesco and others, in mature animals, had been almost invariably fatal. Cushing, whose reported work goes back to 1909, found that while extirpation of the posterior lobe alone did not produce death, total ablation ended fatally, although he felt that the fatal issue could be postponed by glandular implants. His partially hypophysectomized animals, which survived, failed to grow, and became obese and sexually dystrophic. So that even as late as 1910, most, if not all, observers felt that the gland was immediately essential to life. In that year, however, Bernard Ashner showed that immature puppies not only tolerated hypophysectomy well, but that they remained dwarfed and sexually immature. This finding was a great stimulus to experimental surgery, although the operative technique remained difficult and the mortality rate high.

CHOICE OF THE RAT AS AN EXPERIMENTAL ANIMAL

B. M. Allen and P. E. Smith, working independently, were among the first to show that removal of the buccal anlage in the tadpole resulted in cessation of growth and failure of metamorphosis into the frog. By the simple expedient of grafting bits of pituitary under the skin of the tadpole, it was then demonstrated that both growth and development were resumed. The choice of the rat as an experimental animal by Evans and Long (1921) proved a happy one. By intraperitoneal administration of fresh anterior lobe substance into numerous animals, these observers reported a consistent effect upon growth and upon the estrus cycle. It was not until Smith's discovery (1926), however, that the rat could be easily hypophysectomized, opening the way for both withdrawal and substitution experiments, that the subject received its greatest impetus. From this time on, pituitary research spread in many directions, but the process of growth continued to occupy a number of able observers. Dandy and Reichert showed that hypophysectomy can be accomplished in the dog by a new and comparatively safe operative technique. Reichert, using Evans' bovine extract intraperitoneally, was able to bring an hypophysectomized animal to a size that exceeded its normal litter mate control. Evans and his associates, using their own extract, and Putnam, Benedict and Teel, using a similar but entirely independent preparation, produced what was comparable to canine acromegaly.

CUSHING'S EFFORT TO REHABILITATE THREE PITUITARY DWARFS

During the summer of 1929, Cushing attempted the rehabilitation of three pituitary dwarfs ranging in ages from nineteen to thirty, with indifferent success. He later discovered (by testing on rats) that most of the growth promoting principle in the preparation he was using had been destroyed.

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* From the department of medicine, University of Southern California.

Read before the General Medicine Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

In 1932 the same observer administered a more potent preparation, for a period of one hundred and ten days, to a former operative (hypophysectomized) patient, who had failed to mature or to keep up in the normal growth increment. While, as one would expect, there was little stimulation of growth in such a short period, subjective improvement was apparent. In 1930, Engelbach, Shelton, Cavanaugh and Evans began the treatment of a dwarfed child by the intragluteal administration of an alkaline extract of the bovine adenohypophysis, which had been demonstrated active by intraperitoneal injection in dogs and rats. Stimulation of growth in the human was proved. While the observation was perhaps of scientific value, its clinical significance remained in doubt. Since this time the last three observers, employing the same preparation (herein known as G. H. fraction A),* and Shelton and Cavanaugh, using a similar but entirely independent extract prepared by a modification of the Van Dyke and Wallen-Lawrence technique (herein known as G. H. fraction B),† have attempted to evaluate the use of such extracts in clinical medicine.

PROBLEMS ARISING IN A CRITICAL ANALYSIS OF THE CLINICAL ASPECTS

It appeared that a critical analysis of the clinical aspect of this subject was the best approach. For this reason three questions were propounded: (1) Would a potent hypophyseal growth promoting hormone be of value in clinical medicine? (2) If so, are the preparations under discussion sufficiently active to be practical? (3) Are these preparations otherwise physiologically innocuous, or would their indiscriminate use be attended by danger?

In an attempt to answer these questions, the following clinical material has been employed: One hypophysectomized child, four outstanding dwarfs ranging in ages from eight to twenty-eight years, six dwarfish individuals, or those several inches under the low borders of normal height, two barely short of the low borders of normal, one adult with fugitive acromegaly, two of a modified form of pituitary cachexia and several obscure endocrinopathies. The preparations, because they contain a prolan synergist (or activator), have also been used, in conjunction with pregnancy urine prolan, in a limited number of children suffering from adiposogenital dystrophy, with whom, in this paper, we are not concerned. In the conduct of the research every effort has been made to control the observation. However, it is one thing to operate upon a dog or a rat, or, to overwhelm their economies with myriad glandular extracts and read the results a few weeks later, and quite another to make controlled and convincing observations in an ailing human. No thyroid, vitamins, minerals or other preparations have been employed over long periods of observation although they have sometimes been used during intervals as therapeutic controls. Engelbach and Schaefer report on the stimulation of growth in children with retarded bone development by means of the administration of 2 cubic centimeters of an anterior pituitary growth fraction, three times a week. Desiccated thyroid was given concomitantly. It was stated in the protocol, that thyroid alone was administered for a period of from two to six months, without a resultant increase in height, before the pituitary fraction was added. It is interesting to note, however, that the Engelbach-Schaefer dwarfs with the greatest degree of bone retardation grew the most. One wonders what, if anything, the small doses of the pituitary preparation had to do with the ultimate growth. It has been shown that retarded bone development, is, if not actually pathognomonic, at least a consistent finding in long standing hypothyroidism of childhood. The more retarded the osseous development, the more rapid the somatic unfolding and the concomitant increase in height following thyroid administration. A number of our hypothyroid dwarfs have gained as much as five inches a year on thyroid substitution alone. In borderline cases (those with only a moderate degree of carpal retardation), the growth spurt, as in the normal, is frequently delayed for several months. Consideration of such factors may invalidate the negative control period with thyroid medication alone, and make difficult the interpretation of subsequent findings. This does not argue that some, or perhaps all of our dwarfs, do not need thyroid, high vitamins or minerals as adjuncts to their treatment. A number may well profit thereby. The pituitary thyroid relationship is well established and P. E. Smith has recently shown that hypophysectomized rats develop more rapidly on both thyroid and pituitary substitution than upon pituitary substitution alone. It means that we have attempted to evaluate the growth promoting fraction of the hypophysis in a manner most conducive to a scientific conclusion. After having arrived at such a conclusion, one should be better able to evaluate its degree of usefulness in enhancing the other known growth promoting factors.

THE PROBLEM OF DOSAGE

The dose has been and remains a problem. The minimum growth stimulating dose of both preparations (G. H. fractions A and B) when given intraperitoneally to a rat weighing approximately 300 grams is from 0.25 to 0.5 cubic centimeter daily, for from fifteen to twenty days. This would be comparable to from 15 to 30 cubic centimeters intraperitoneally for a child weighing forty pounds. All of our injections have been given intramuscularly and theoretically at least, the minimum effective dose when given to such a child, in such a manner, would be even larger. While we have administered as much as 13 cubic centimeters daily for a short period, our average dose has approximated 5 cubic centimeters daily intragluteally six days a week, except in adult patients suffering from so-called pituitary cachexia, where the growth stimulating property was not desired. If, as the Engelbach-Schaefer protocol would infer, stimulation of growth actually resulted from

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* The material for this study was supplied through the department of biological research, University of California.

† The material for this study was supplied through the research department of E. R. Squibb and Sons.

2 cubic centimeters of the pituitary fraction, when given three times a week, then one of four things must be apparent, namely, either there is a remarkable species difference in the growth response, or their preparation is more potent than those we have employed, or we have produced an antigrowth mechanism by too large a dose, or there is a more remarkable synergistic action between these preparations and the thyroid hormones than we have previously considered. One would not care to arrive at any of these conclusions without ample verification of their findings. The experiences of Lisser, who employed the same preparation as the previously mentioned observers, are similar to ours. In a series of carefully controlled observations, although admitting stimulation of growth, he has not been able to convince himself of any miraculous growth promoting principle in the product. He also agrees with us that the patients ultimately appear to become refractory, about more of which will be said anon. This is an outstanding example of the difficulties attending such a research.

REPORT OF CASES

While much of our material continues under observation, we feel that enough has been learned to warrant reporting. In order that the reader may share in the ground work, a few case reports are given in brief.*

Case 1.—P. P., aged twenty-five years, had been in perfect health until 1931. Following an acute cerebral episode, diagnosed as some form of meningitis, there developed a progressive asthenia, anorexia and loss of weight (from 189 pounds to 130 pounds). Roentgen studies of skull and extremities revealed changes characteristic of acromegaly. On the contrary, his complaints, taken with evidence of a high glucose tolerance, increased insulin sensitivity, low oxygen consumption (minus 40 per cent), hypotension (105/80) and the presence of a calcified shadow within the sella, pointed to pituitary deficiency. It was felt this condition was probably engrafted on a previous early and insidious acromegalic state. It was seen that neither thyroid medication, adrenal substitution by mouth, nor dietary measures were capable of arresting weight loss, or diminishing the asthenia. The intramuscular administration of an alkaline extract of the anterior pituitary (fraction A) led at once to weight gain and subjective improvement. The hypometabolism and hypotension remained unaltered. This observation was repeated at interrupted intervals over a period of twenty months (fractions A and B) with consistent results. The patient was partially rehabilitated with pituitary substitution, and continues to maintain at a low level of normalcy.

To avoid repetition, the negative findings in the following patients will be considered en masse. In no instance was either parent under sixty-one inches in height. There is no history of dwarfism in any family. Physical examination revealed nothing abnormal in the heart, lungs, or abdomen of any of the patients. The urine was normal and a negative Wassermann was found in all. The blood pictures were consistently normal.

Case 2.—B. J., a male, aged seventeen years one month, of Anglo-Saxon parentage, consulted us September 20, 1933, complaining of understature. Height 63.8 inches, weight 111 pounds. The previous annual increment was estimated at approximately 1 inch. Physical examination revealed nothing abnormal except retarded growth and development. Roentgen studies revealed a normal sella and open epiphyses. Treatment: Alkaline extract bovine anterior hypophysis (G. H. fraction A) was given five days weekly intragluteally. Maximum dose 5 cubic centimeters. Treatment continuous for eleven months. Actual increment 1.7 inches. The estimated increment was 1 inch. The average normal increment for the same age is 1.1 inches. Weight gain was 6.1 pounds. At the end of the following year without treatment, his height was 65.8 inches and the weight was 116.8 pounds (no gain).

* * *

Case 3.—L. A., a male, aged seventeen years nine months, of Italian parentage, consulted us June 26, 1934, complaining of understature. Height 57.9 inches, weight 83.2 pounds. The previous annual increment unknown. Physical examination revealed nothing abnormal except retarded growth and genital development. Roentgen studies revealed a normal sella and almost completely closed epiphyses. B. M. R. estimations averaged minus 22 per cent. Treatment: Alkaline extract bovine anterior hypophysis (fraction B) given intragluteally three days a week. Maximum dose 5 cubic centimeters. Desiccated thyroid with high iodin content grains one to one and one-half daily. Treatment continuous for six months. Actual increment 0.4 inch (within limits of error). Weight gain 10 pounds.

* * *

Case 4.—W. M., a male, aged twenty-seven years nine months, of Anglo-Saxon parentage, height 53 inches, weight 71.3 pounds. No secondary sex characters. Genital hypoplasia. The annual increment for the previous four years was 0.5 inches. B. M. R. estimations averaged minus 22 per cent. Carbohydrate tolerance was high. Roentgen studies revealed a microsella and open epiphyses. Treatment: Desiccated thyroid grains one-half daily for three and one-half months. There was no appreciable increase in height during this period. Weight loss 7 pounds. Thyroid was discontinued and the alkaline extract of the anterior lobe of the pituitary (fraction B) was given five days weekly. Maximum dose 5 cubic centimeters. Treatment continuous for twelve months. Actual increment 1.1 inches. The estimated increment for twelve months was 0.5 inch. Roentgen studies were made at the close of this period, and epiphyses were found to be open to the same degree as on original examination.

* * *

Case 5.—F. O., a male, aged eleven years five months, consulted us complaining of understature. Height 47 inches. Weight 51.8 pounds. The annual increment for the previous four years was 1.4 inches. Physical examination revealed nothing abnormal except retarded growth and development. B. M. R. estimations averaged plus 12 per cent. Roentgen studies revealed rudimentary anterior clinoids of the sella turcica and open epiphyses. This patient was used as a control and received no treatment for twenty-three months. The actual increment in twenty-three months was 3.2 inches. The estimated increment based on the average for the previous four years was 2.68 inches. The average normal increment for this age is 3.7 inches. The weight gain was 12.8 pounds. The patient was then given the alkaline extract of the bovine anterior hypophysis (fraction A for six months, fraction B for fourteen months) intragluteally five days a week. Maximum dose 6 cubic centimeters. Treatment was continuous for twenty months. The actual increment was 5.4 inches. The estimated increment based on the previous average (while under observation but without treatment) was 2.8 inches. The average normal increment for that age is 2.83 inches. The weight gain was 19 pounds. The patient was then placed on desiccated thyroid with high iodin content, one-half grain daily for six months (without A. P. E.). The actual increment during this period was 1.3 inches. The estimated increment based on the rate during the control period was 0.85 inch. The average normal increment for this same period was 0.8 inch. The weight gain was 9.5 pounds. B. M. R. estimations at the close of this observation averaged minus 5.5 per cent.

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* A preliminary report of six cases of dwarfism was published in the *American Journal Diseases of Children*, volume 47, pages 719-735, April, 1934. While these children continue to be among our most informative observations (as regards the effect of G. H. fractions A and B on growth), it is felt their protocols continue to belong to this *Journal* and cannot be set down here.

COMMENT

From these and other observations we are forced to believe that there is a genuine need for a potent hypophyseal growth promoting hormone in clinical medicine. First, because of the myriad sufferers from understature who crave a semblance of normalcy. No one, not actively engaged in this type of endeavor, can appreciate the somatopsychic inferiorities with which many of these persons are afflicted. Fortunately, this is not always true of the actual dwarf who, for economic reasons, frequently finds it more profitable to be very small than merely a few inches under the low average normal. Secondly, while classic Simmond's Disease is rare, a form of borderline or modified pituitary cachexia is, perhaps, more common than many suspect, particularly the transitional or so-called burned out pituitary case.* When considering that acidophilic elements in the adenohypophysis must have an important place in the maintenance of the body economy long after the process of growth is completed, and that in spite of their protected position they are vulnerable to new growth, hemorrhage, infarcts, cysts, calcification, abscess formation, syphilis and other inflammatory processes, bony encroachment, defective development, metabolic disorders originating elsewhere and even functional disturbances of the vascular and nervous mechanism, this should not be surprising. Aside from these, there is need for a potent product in clinical research as in the therapeutic investigation of obscure bone, joint and muscular dystrophies, which may prove of pituitary origin.

ARE AVAILABLE PREPARATIONS OF PRACTICAL USE IN CLINICAL MEDICINE?

Are the preparations, now available, sufficiently active to be of practical use in clinical medicine? In common parlance, the answer is yes and no. Evidence has been presented to show how one case of so-called transitional acromegaly responded and continues to maintain on the growth fraction available. We have had encouraging results in others whom we have considered as having pituitary deficiency. The physiologic problem in classic Simmond's Disease is exceedingly complex. It is quite likely that the adrenotropic, thyrotropic, contra-insular and gonadotropic, if not other pituitary fractions and the hormones of other glands, are equally at fault. It appears, however, that physicians have been too prone to depend upon the classic picture for a diagnosis. Everything must have a beginning, and in metabolic or endocrin disorders they are often insidious and, therefore, masked. It may be argued that contamination of our product with some of the other active principles had more to do with the partial rehabilitation of the transitional acromegaly patient than the growth factor. To us, this would not appear to be true. While there was marked gain in weight and muscular strength in our patient, no change whatever was noted in blood pressure or oxygen consumption, and very little in the glucose tolerance. From this standpoint, then, the present preparations are apparently potent enough to save life or at least to prevent invalidism in selected cases. Neither of the preparations which we have used is sufficiently active, in growth promoting properties, to be practical in the rehabilitation of dwarfism. Neither do we feel that they would prove practical in the prevention of hypophyseal dwarfism, in which there is complete or nearly complete absence of the natural hypophyseal secretion. On the other hand, unless we have deceived ourselves, which is quite possible in such a research, we feel that either one of the preparations is of sufficient potency to be practical in the partial (perhaps total) rehabilitation of dwarfish or borderline individuals who, by consistently losing in the growth increment, would otherwise remain staturally immature. After all is said and done, therefore, we believe that while these preparations do not warrant enthusiasm regarding their growth promoting properties, they are better than none. A much more potent extract is to be desired if it is to find practical use in clinical medicine.

ARE AVAILABLE PREPARATIONS PHYSIOLOGICALLY INNOCUOUS?

Are these preparations otherwise physiologically innocuous, or would their indiscriminate use be attended by danger? The answer to this question is the most difficult of all. It is not the purpose of this paper to elaborate upon the various physiologic principles *suspected* of originating in the hypophysis. Suffice it to say that, with growth, gonadotropic, lactogenic, thyrotropic, adenotropic, parathyrotropic, contrainsular and lipoid influencing fractions to deal with in the adenohypophysis, to say nothing of pressor, oxytocic, pigment influencing and probably gastric influencing fractions in the pars intermedia and only three, or four recognizable type of cells to secrete them, the present physiologic status is, at best, confusing. While it is difficult, for one familiar with the cytology of the pituitary, to believe that each and every one of the principles or fractions mentioned is a chemically identifiable hormone, and not merely a physiologic phase of a few mechanisms, the growth hormone would appear to stand a good chance of ultimate recovery in the pure chemical state.

PROBLEMS ARISING IN TREATMENT OF PATIENTS WITH HYPOPITUITARISM

Most sufferers from hypopituitarism, or what we have taken to be hypopituitarism (since the diagnosis must remain unverified except in rare instances), show clinical and laboratory evidence of multiple physiologic deficiencies, *i. e.*, understature, cachexia, low oxygen consumption, low blood-pressure, high carbohydrate tolerance, genital hypoplasia, etc., either alone or in combination. Theoretically, therefore, a mixture of a number of physiologic principles for artificial administration should be ideal. On the other hand, one could never hope to balance these fractions in a test tube as they appear to be in the normal body economy. Biochemists have, for this reason, attempted to separate them into pure physiologic principles so that they might be reintroduced according to physiologic demand. Their efforts have been attended with only moderate success. While the preparations which we have employed are relatively free from such contaminating influence, they contain traces of the thyrotropic, sex complementary, contrainsular, and perhaps other fractions. Seibert and Smith, Lee, Teel and Gagnon, Thompson and others have shown, and we have verified,* that the thyrotropic hormone quickly raises the oxygen consumption and will subsequently depress it even to a degree not encountered at the start. Thyroid hyperplasia followed by thyroid atrophy has attended its use. Houssay, Evans and others have shown that some preparations are so insulin-antagonistic as to produce experimental diabetes, while the sex fractions, if given in excess, or over a prolonged period, may produce wholly undesired results. By careful and repeated tests on our patients over a period of four years, we have been unable to discover but few untoward physiologic reactions. That these reactions may be latent, however, we wish to point out a lowering of the carbohydrate utilization and the appearance of glycosuria in one of our dwarfs (whom we have had under treatment for four years) within the past few weeks. The general level of oxygen consumption is also moderately lower at present than at the beginning of the experiment. Otherwise, every person we have treated appears in the best of general health with the possible exception of those considered as suffering from pituitary cachexia, who remain only partially rehabilitated.

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* Cushing and Bailey and others have pointed out that acromegalies and giants, who have early suffered from hyperpituitary conditions may and frequently do drift into hypopituitary states. Whether the pituitary adenoma actually burns out from excessive secretion (as an exhaustion state), or the secretory embarrassment is due to infarcation, calcification, hemorrhage, compression, or some other factor, is unknown. One such case is herein reported.

ANTIHORMONE THEORY OF COLLIP

Another disquieting note in the difficult composition of clinical research is the antihormone theory of Collip and his associates. What happens to the treated individuals after they have received the growth fraction for any length of time? Does one develop antihormones and destroy what little chance he may have for spontaneous recovery? From our findings we have not, so far, felt this to be true. There is definite evidence, however, that the response to the hormone is greater at first than subsequently. In the case of the twenty-eight-year-old dwarf, with open epiphyses, there was very little response from the beginning. This, of course, argues an antihormone or other antagonistic effect. If there is a true antihormone effect it must exert its influence in the normal, since all normal individuals are constantly bathed in hormones. The artificial administration of a natural product (free from contaminating proteins) should not embarrass the body economy when given in the proper dose and at the proper time. Therefore, so far as clinical medicine is concerned, it remains a matter for investigation and not one for panic. In final analysis, while from our experiences, the dangers of these preparations in clinical medicine would appear exaggerated, we must admit that their indiscriminate use, at the present time, would not be without an element of danger. A pure growth hormone without the contamination of other physiologic principles and a better understanding of the so-called antihormone influences are highly desirable.

SUMMARY AND CONCLUSIONS

After some years' experience with two preparations of the bovine adenohypophysis relatively high in growth promoting principles, an attempt is made to evaluate their clinical usefulness. In a critical analysis three questions were propounded: (1) Would a potent hypophyseal growth promoting hormone be of value in clinical medicine? (2) If so, are the preparations under discussion sufficiently active to be practical? (3) Are these preparations otherwise physiologically innocuous, or might their indiscriminate use be attended by danger?

While much of the clinical material continues under observation, it is felt enough has been learned to warrant a few conclusions, namely, a pure, potent, hypophyseal growth hormone would be a boon to medicine. The preparations under discussion are sufficiently active to stimulate growth (during the growth period), but not at a rate, sufficiently above normal, to rehabilitate the classic dwarf. They appear to have little effect, after the growth period, even when the epiphyses remain open. It is theoretically possible, but clinically impractical to prevent dwarfism, when the growth increment is 50 per cent or more deficient. It would appear that they are sufficiently active to keep the growth up to, or slightly in excess of the normal, in persons who are from 25 to 50 per cent deficient in the growth increment. They are also sufficiently active to produce a rapid gain in weight and increased muscular strength and to maintain, at a low level of normalcy, persons suffering from modified forms of pituitary cachexia resembling transitional acromegaly or Simmond's Disease. In final analysis, while the growth stimulating property of these preparations does not warrant enthusiasm, the preparations are clinically useful. Although few untoward effects have been discovered, in persons treated by these preparations, and the dangers incident to their use would appear exaggerated, their contamination with other active hypophyseal fractions, together with the possibility of producing antagonistic influences, would make their indiscriminate use, at this time, undesirable.*

24 West Micheltorena Street.

DISCUSSION

H. Lisser, M. D. (384 Post Street, San Francisco).—It is a pleasure to discuss this paper. Doctor Shelton is well aware that I would not hesitate to disagree with him if my opinions differed from his. It so happens that our experiences and interpretations regarding the clinical application of the pituitary growth factor coincide in almost every particular.

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* Case No. 1 herein reported.

* Keyed references to this article will be given in the reprints.

When Evans, in 1923, announced his brilliant production of gigantism in the rat by intraperitoneal injections of an extract he had prepared from the bovine adenohypophysis, I looked forward with enthusiasm to utilizing such a preparation in human cases of hypophyseal infantilism. Although it is admitted that pituitary dwarfs are relatively uncommon (but by no means rare), milder instances of skeletal and genital retardation, due to anterior pituitary deficiency, are encountered frequently. It was, therefore, a great disappointment to wait in vain, year after year, for this pituitary growth stimulant. Meanwhile, occasional success was attained from the oral use of anterior pituitary powder, put up in salol-coated capsules and taken in fairly large doses over a period of two to three years, despite the fact that the oral administration of pituitary products, experimentally, was supposed to be ineffective.

At last, within the past two or three years, three pharmaceutical houses have prepared what purports to be a product containing the growth-stimulating principle of the anterior pituitary (not in pure form), and have provided me with a generous supply for clinical research, prior to placing these products on the market commercially. It is to be stated at once that these preparations have not, in a single instance, produced a spectacular growth comparable to that achieved over and over again by the simple administration of thyroid substance to myxedematous dwarfs. In the latter condition, an increase of height between six inches and a foot, in a single year, has been accomplished frequently. Theoretically, a similarly potent anterior pituitary growth hormone should stimulate an equal growth increment in cases of hypophyseal infantilism. To date, this has not been consummated. Furthermore, daily injections over months and years are somewhat inconvenient as compared with the simple oral administration of thyroid substance, particularly if doses of five cubic centimeters or more are necessary. In my experience, which covers at least thirty cases of retarded growth, interpreted as due to primary pituitary deficiency, we have never administered more than three cubic centimeters daily, and ordinarily have been content with one or two cubic centimeter doses.

Our results may be tersely summarized as follows: A minority have not responded at all; a minority have exceeded somewhat the normal rate of growth; the majority have been stimulated to grow at approximately the normal rate. With regard to the first group, I would utter a word of caution, namely, of routinely excluding the possibility of renal dwarfism. We have recently encountered two instances that readily could have been mistaken for pituitary infantilism; both had lowered basal rates and retarded bone age, but most certainly were not examples of childhood myxedema; investigation of their blood nonprotein nitrogen and phthalein output revealed them as instances of renal dwarfism; naturally one would not expect success in treating this condition with either thyroid or pituitary hormones. With regard to the majority group, who respond with a fairly normal growth rate: conceivably the criticism might be made that the growth obtained occurred naturally and should not be ascribed to the pituitary therapy. However, such an assumption would appear to be most unlikely in view of the abnormally slow growth prior to treatment.

Although it may be inferred from the above that growth-stimulating treatment by the pituitary extracts at present available is discouraging, I hasten to add emphatically that even a moderate amount of growth is eminently worth while, unless, of course, the individual wishes to commercialize his or her dwarfism on the stage or in the circus. The embarrassment and the inferiority complex usually acquired by these boys and girls, particularly as they pass through the ordinary years of adolescence, is most pathetic. It is, therefore, incumbent upon us to utilize what we have, and do the best we can.

Finally, a word regarding the latest bugaboo—"antihormones." With no intention to disparage the eventual importance that may come from recognition of antihormone production in the human economy, it is none the less premature and ill-advised, on the basis of our present information, to become panicky over the clinical use of endocrine preparations. It is peculiar, to say the least, that thyroid substance can and must be continued for life in severe cases of childhood or adult myxedema without the remotest evidence that it ever loses its efficacy. It is equally odd that insulin therapy can be continued indefinitely in diabetes without apparently the development of an antihormone frustrating its action. There is no evidence as yet that posterior pituitary extract administered day after day by injection, or as a snuff to victims of diabetes insipidus, forfeits its potency. However, it must be admitted that patients with severe chronic tetany gradually become immunized to prolonged treatment with parathyroid extract. Whether this represents an antihormone action or an acquired immunity to some protein constituent of the extract, is not settled. Meanwhile it is unfortunate that the pronouncement of antihormone possibilities should so quickly frighten the clinician into abstaining from clearly indicated endocrine therapy. Only lately the discusser was called in consultation by a distinguished clinician in the case of a pituitary dwarf to whom the growth hormone had not been administered for fear of interfering with natural growth by the production of an antihormone.

In conclusion, permit me to congratulate the author on his splendid presentation of his well-controlled clinical experiences. He has presented the facts clearly and interpreted them wisely.

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Lyman A. Cavanaugh, M. D. (34 West Micheltorena Street, Santa Barbara).—I feel that Doctor Shelton's approach to this problem is highly commendable. In the conduct of such a clinical research, there are many pitfalls to be avoided. To give scientific credence to the conclusions, the subjects must be carefully controlled. This is particularly true during the preadolescent and adolescent periods. In a similar study designed to evaluate the growth-stimulating properties of an anterior pituitary extract, in which Doctor Shelton and I collaborated, we saw one of our control cases (without treatment and under close observation) suddenly start growing in excess of the average normal.

The element of measurement also constitutes a source of error. When using the most rigid wall standard with measurements taken at the same time of day by the same experienced observer, there is frequently a variation of from three- to five-tenths of an inch. The variation, when taken on the ordinary insecure scale standards at different hours of the day by different observers, must be much greater.

Doctor Shelton's point as regards the fallacy of giving thyroid extract concomitantly during the period of scientific observation, is also well taken. The practice of giving polyglandular treatment has always been a great hindrance to the elucidation of clinical endocrinology. One must thoroughly understand the specific effect, if any, of each fraction before combinations can be intelligently administered. The ultimate viewpoint as to what regimen is best for a given subject will come only in the light of this knowledge.

Doctor Riddle has recently expressed the belief that the growth-stimulating properties of the anterior pituitary are the result of a combination of factors such as the thyrotropic, adrenotropic and gonadotropic fractions, and are not due to a specific growth hormone. Even if this were true, it would not detract from the need for a growth-promoting principle. It should make us more cautious, however, in administration.

GUNSHOT WOUNDS OF THE ABDOMEN

By R. W. Binkley, M.D.
and
E. R. Cole, M.D.
Selma

Discussion *by George K. Rhodes, M.D., San Francisco; H. Glenn Bell, M.D., San Francisco; John Homer Woolsey, Woodland.*

GUNSHOT wounds of the abdomen have been with us as long as have guns.

In civil life they came as the result, principally, of dueling, and carried an eventual mortality close to 100 per cent.

During the Revolutionary War penetrating gunshot wounds of the abdomen carried a mortality in the neighborhood of 90 per cent, because it was not the custom to employ surgery. Then, as today, if death followed quickly it was due to hemorrhage, and if delayed it was usually the consequence of the resultant peritonitis. Surgery, when it was instituted, was done for the purpose of controlling hemorrhage, and not with the idea of closing perforations. Even so, it reduced the mortality some.

During the Spanish-American War some five cases were treated with the purpose in mind of repairing the intra-abdominal damage, and there resulted another lowering of the mortality. Not, however, until within the last twenty-five years has it become the accepted and established practice immediately to explore and repair all gunshot wounds of the abdomen. And with the advent of this custom the mortality has been decreased to approximately 60 per cent and, strangely enough, though we have accepted this method for twenty-five years, there has been little improvement in the mortality during that time.

To place all penetrating wounds of the abdomen into one class for the purpose of statistics is a mistake; for the amount of hemorrhage and the extent and location of visceral damage is so variable that they should be classified accordingly. For example, the size of the bullet and the course it takes is important, even though the same visceral organs be penetrated. Wounds from front to back carry a higher mortality than those from back to front, other factors being constant. Wounds through solid organs carry a lower mortality in general, unless a large vessel is opened and the hemorrhage profuse, than wounds of the digestive canal. Then the solid organ injured affects the mortality, for pancreas injuries are more serious than an equal injury to liver or spleen. The reasons for this are obvious: wounds which open the intestinal tract are more serious because of resultant bacterial contamination. Also the level at which the intestinal tract is opened affects greatly the mortality because of the infectious nature of the material spilled. It is for that reason that injuries of the stomach and small intestine carry a lower mortality than do injuries of the colon, this being aside from the difficulty in repairing the intestinal tract at its different levels.

The above factors influencing mortality are in no way subject to the surgeon's control, and their attendant mortality can only be affected or lowered by our consideration of other factors which influence the mortality.

The first and foremost factor within our control has to do with the time element. In the majority of cases in civil life the first thought of the injured or those about him is to seek medical aid; consequently, as little time as is possible is lost with the first step. The next step is the time consumed after notification before treatment is instituted, and then another step involving time is the length consumed in the procedure instituted. These factors are definitely laid at the surgeon's door. Prey and Foster of Denver have stressed these two points forcibly in their paper, and have outlined a procedure which is applicable in the larger institutions where internes and staff officers first see the patient. They emphasize the fact that while the interne is waiting for the consultant, he should have the operating room made ready, intravenous started, blood grouped, and donors located. The time gained by such a procedure saves, no doubt, lives.

The surgeon who does not have those facilities should himself think along those lines, and as a result, as soon as he sees a patient with a gunshot wound of the abdomen, he will, while making the examination, have all preparation set in motion for the surgical procedure at the earliest possible moment. Of course, some surgical judgment must be exercised in the case of the patient in shock, but oftentimes it is impossible to say if the shock is traumatic or from hemorrhage. In either case intravenous glucose can be started immediately, before one is prepared for transfusion or operation, and it is better to go in on the case of traumatic shock than to stay out in the case of hemorrhage. I have twice seen this inability to determine the nature of the shock in cases of ruptured spleens with hemorrhage, and once in hemorrhage from a pelvic artery, and waiting to see, cost the life of one of the patients. If it is hemorrhage, to run fluids into the circulation is, obviously, not sufficient unless we stop the leak.

Then, too, in considering the abdominal cavity we must not forget that it extends farther upward than the rib margin and farther down than the pelvic brim, and any penetrating wound from its topmost border to its very floor must be considered as having injured some part of the intestinal tract, and the abdominal cavity must be regarded as potentially infected and the seat of future peritonitis if untreated.

For these reasons, in either case, to combat the early deaths from hemorrhage which constitute the larger group, and the later deaths from peritonitis the smaller group, it is essential to adopt the policy as expressed by Urban Maes: "Look to see, don't wait to see"; for to wait may be to lose the patient's best chances. During the World War to routinely operate upon these patients gave a lower mortality than waiting; for to wait until symptoms develop is to wait too long. Doctors Eliason and McLaughlin say, "No one with operating facilities today is justified in postponing these cases one hour. A penetrating missile will almost certainly injure vessels or a hollow viscus; the one causing hemorrhage, the other contamination and subsequent peritonitis. A surgeon has no right to hope that neither has happened. Immediate operation after the patient is deshocked is the safest procedure."

The following cases illustrate some of the above points of what not to do as well as what to do.

REPORT OF CASES

Case 1.—Boy, seven years old, threw rifle cartridge into stove and was shot in the abdomen, just above and to the left of the umbilicus. The patient was seen within one hour and immediate operation advised. The parents refused, on religious grounds. The child went through the usual course of a peritonitis and died on the eleventh day.

Comment.—This was a case of standing by and waiting for the inevitable.

* * *

Case 2.—Man, age 52, was shot in the right lower quadrant with shotgun while hunting. Seen about one and one-half hours after the accident and given hypodermic of one-half grain of morphin for pain, and transported by ambulance to the hospital. Telephoned ahead to have operating room and intravenous ready, and consultants waiting. Arrived at hospital one and one-quarter hours later. The patient was then comfortable from his morphin, had a pulse of 98, subnormal temperature, and blood pressure was 110/80. Examination of abdomen showed numerous separate bird-shot wounds over right lower quadrant especially, but extending from rib cage down onto thigh and over beyond midline. Catheterization showed no blood in the urine, suggesting that the bladder had not been penetrated. (The patient had voided just before the accident and bladder was contracted.) A consultation of four surgeons was held, and it was decided to wait for further developments, in spite of the fact that the operating room was in readiness. Within eight hours the pulse was 112, and in seventeen hours it was 124; but still the operation was postponed. The patient ran the usual course of a progressive peritonitis, with temperature, pulse, distention, and vomiting until the fifth day, when it was agreed he should have the advantage of an exploratory laparotomy. This was done under general anesthesia, and it was found that the abdominal cavity was the seat of a generalized peritonitis and the small intestine loops of the right side were riddled with small, leaking holes. A resection of the involved gut was hurriedly done, but the patient expired two days later, seven days following the accident.

Comment.—The patient was deprived of his only chance to live by not operating immediately. Stereoscopic x-rays would have shown that the shot had entered the abdominal cavity, but such was not available at the time. Bird-shot wounds of the stomach and intestine cause surprisingly little leakage in the first few hours. They are practically closed by the muscle layers until distention begins to develop. I saw one man opened four hours after being shot with bird shot, and though he had holes into the stomach, transverse colon, and loops of the small bowel, there was practically no leakage. Early exploration, under local anesthesia if necessary, until one is sure of contamination or lack of it, will save many of these.

* * *

Case 3.—Police officer, age 39, while on duty was shot with a .22-caliber long rifle in the right upper abdomen. He was taken immediately to the hospital, where he was seen by two physicians. The patient was not greatly shocked, and owing to location of the bullet hole and the position in which he was standing when shot, it was thought that the bullet was too high to pass through the intestines and had penetrated the liver instead. The bullet did not emerge through the back, so the exact direction could not be determined. Two other doctors saw the patient within the next ten hours, and it was decided to await further developments. The patient was first seen by one of the writers about twelve and one-half hours after the shooting. The patient was in no apparent pain and in good spirits, but having that anxious expression of one seriously ill. His temperature was 100 F., pulse 120, blood pressure 120/80, and respirations 24. The respirations were rather shallow and grunting in character, due to the splinting on the right side. The abdomen was rounded, tympanitic, quite rigid and tender throughout, but especially over the right upper quadrant. There was a bullet wound in the right upper quadrant, just missing the lower border of the rib cage and a little lateral to Robson's point. The patient was too tender and rigid to palpate the liver edge, but assuming it to be at a normal level it was felt that the bullet had passed below the lower margin of the liver and would consequently have to pass through at least one hollow viscus. The bullet did not emerge through the back, but there was a tender point in the back, indicating that the bullet was lodged in the kidney region. The patient was unable to void, but upon catheterization a pint of normal urine without any blood was obtained.

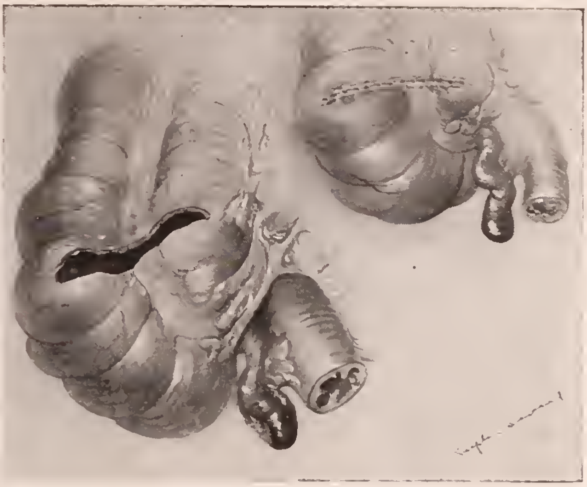

Fig. 1.—Injury to cecum and repair.

In view of the location of the bullet wound, it was felt that there was only one course to pursue, namely, exploratory laparotomy.

The patient was given a quart of glucose solution intravenously while waiting for the operating room, and a right pararectus incision was made with the upper end at the bullet wound. This was done and the abdomen opened under local anesthesia with the idea that we would look in, and if no contamination or hemorrhage was present the belly could be closed with no appreciable added risk. Upon entering the peritoneal cavity, gas, feces and blood began to pour from the incision, so the patient was given ether and the surgery continued.

It was found that there was a bleeding point in the mesocolon, also two perforations in the transverse colon, which were leaking bowel content. The anterior perforation was immediately closed, after which the bowel was rotated to expose the posterior perforation, which was then closed also. Further exploration showed the bullet had then passed completely through the ascending colon just below the hepatic flexure, and the anterior opening was leaking fecal material. This opening was closed; and in order to locate the wound of exit, from the ascending colon, it was necessary to mobilize the ascending colon by separating it on the lateral side at the peritoneal reflection and rolling it mesially until the posterior wound was found. In doing this a retrocolic or retroperitoneal collection of blood, contaminated with feces, was encountered. This wound was then closed, and the abdomen cleaned, so far as possible, with the aid of suction and packs. There were no perforations of the small intestine.

A small drain was placed in the retrocolic pocket, above described, and the abdomen closed around a small catheter through which was injected 200 cubic centimeters of

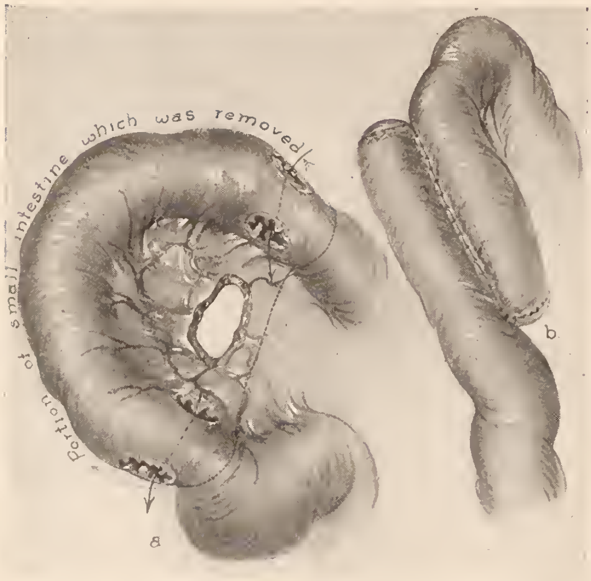

Fig. 2.—(a) Injury to small bowel, showing two points where bowel was almost transsected (bullet holes should be larger than in figure). Hole in mesentery destroyed blood supply to this loop. Dotted line in (a) shows where resection was made. (b) Side to side anastamosis.

amfetin. The patient was returned to his room with his pulse still 120 and blood pressure 130/80, having stood the operation well.

He was given a prophylactic dose of polyanaerobic serum and more glucose intravenously, and saline by hypodermoclysis. A nasal tube was passed to the stomach and connected with continuous suction bottle. He was given water freely by mouth, which was a source of much satisfaction to him even though it was immediately syphoned out through the nasal tube.

The patient progressed satisfactorily until the fourth day, when he had a chill and the temperature went up to 104.8. On the fifth day a definite consolidation could be elicited at the base of the right lung and râles at the base of the left lung. Fecal drainage then appeared at the former site of the drain, and continued. The patient gradually grew worse and expired on the eleventh day, in spite of all that could be done.

Postmortem showed pneumonia of bases of both lungs, fecal fistula from anterior wound of ascending colon, peritonitis, and paralytic ileus.

Comment.—This case should have been operated immediately after admission to the hospital. The fecal fistula should have been avoided by more careful closure or possibly by not using any drain. The pneumonia might have been unavoidable; but the use of oxygen and carbon dioxid was not tried until it was developed. The peritonitis and ileus could have best been avoided, though not guaranteed, by earlier operation.

* * *

Case 4.—Police officer, age 28, was shot by .41-caliber pistol while on duty, the bullet entering the left side, just above the iliac crest, and emerging on the right side through the upper margin of the ilium.

He was taken to the sanitarium, where he arrived about twenty minutes later, in a condition of moderate shock. While preparation was being made for operation, he was given preoperative hypodermic of morphin and atropin, and a quart of glucose solution intravenously. He was taken directly to the operating room upon arrival, and the preparation made there. A laparotomy was done as quickly as possible, saline being given by hypodermoclysis during the operation.

A midline suprapubic incision was made and, though little time had been lost in operating, the abdominal cavity already contained much blood and considerable spilled intestinal contents. The hemorrhage, which is the first consideration, was found to be coming from a transsected artery to a loop of small intestine, as indicated in Fig. 2. While ligating it, rubber-covered clamps were placed so as to prevent further leakage from this loop of bowel, which had almost been transsected at two points. (The illustrations, which of course were made later, do not properly show the amount of damage to the bowel, as the holes were much larger in proportion to the size of the bowel.)

Then, starting at the ileocecal valve in order to systematically locate all lesions, it was found that there was one hole in the cecum, just above the ileocecal valve, and eight holes in the small intestine. The bullet did not enter and leave the cecum, but cut across the anterior surface, as indicated in Figure 1. The descending colon escaped injury. Then inspecting every inch of the small intestine, beginning at the ileocecal valve, the first injuries were found to be those pictured in Figure 2, and the last in Figure 3.

The injury to the cecum was repaired, first with a locked-stitch and then inverted by a continuous Lembert of gastro-intestinal suture. The loop of small intestine in Figure 2 was so badly damaged, being almost transsected, and the blood supply so cut off by the transsection of the artery in the mesentery, that resection had to be done in spite of the fact that such a procedure is recognized as greatly increasing the mortality. This was rapidly accomplished by tying the intestine proximal and distal to the damaged part, and cutting between the ties on the preserved part and clamps on the part to be removed. The tied ends of the bowel were then inverted, as an appendix stump with linen. A side-to-side anastomosis was then rapidly done in the usual way. The only other feature of the procedure that was unusual was the closure of the two holes, as in Figure 3. They were larger and a little closer together than is indicated in the figure, and a simple repair was impossible, for the section of tissue between the holes would not hold for repair of the two holes separately. The patient, too, was already so much shocked that another resection seemed more than he could stand; hence, to lessen the time consumed the two holes were converted into one by cutting out, with scissors, the band of tissue between them. The gut was then knuckled in, closing it transverse to the axis of the gut, as illustrated. Thus, instead of narrowing the gut at this point, it was actually wider in its internal diameter, and the procedure consumed but very little time.

When we were sure there was no further damage, the abdomen was cleaned by suction and packs and made ready for closure. The next question was to drain or not to drain. Not many years ago no surgeon would have hesitated on this point, for all would have drained. We did not drain, but merely left a small rubber catheter emerging from the lower angle of the incision through which 200 cubic centimeters of amfetin was injected after the abdomen was closed. The catheter was withdrawn, being left only for injecting the amfetin.

The patient was sent to his room in fair condition, but with a pulse of 140, though of fair quality, and blood presssure of 100/75. The hypodermoclysis started in surgery was continued in his room and intravenous glucose again started. By the time a donor could be located and grouped he had so improved that a transfusion was postponed.

He was given a prophylactic dose of polyanaerobic serum and Edwenil was started according to directions, with the idea that it would do no harm and might stimulate some protective reaction. He was also started on inhalations of oxygen and carbon dioxid at frequent intervals as a prophylactic against atelectatic pneumonia. His postoperative course was briefly as follows: 8 p. m.: Glucose, 2,000 cc. intravenously. Saline, 2,000 cc. hypodermoclysis. Oxygen and carbon dioxid at intervals.

First postoperative day—9 a. m.: Glucose solution, 1,000 cc. intravenously. Oxygen and carbon dioxid at intervals. Maximum temperature, 102.4; pulse, 128. 5 p. m.: Saline, 1,000 cc. subcutaneously. 9 p. m.: Glucose solution, 1,700 cc. intravenously.

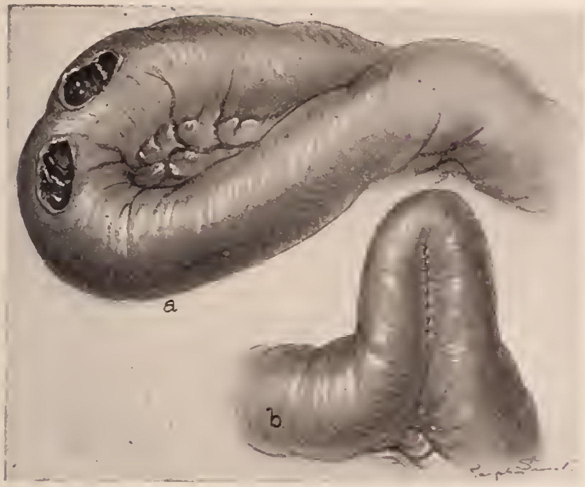

Fig. 3.—(a) Showing bullet holes in bowel. (They should be larger in proportion to size of bowel.) The portion between the two holes was cut away, converting them into one hole. (b) Method of closing the holes after conversion into one.

Second day—3 a. m.: Saline, 1,500 cc. subcutaneously. 9 a. m.: Glucose, 2,000 cc. intravenously. Nasal tube to stomach and connected with continuous suction. Water permitted ad libitum by mouth and syphoned off through tube. Fluid returning is bile-stained. 9 p. m.: Glucose solution, 2,500 cc. intravenously. Maximum temperature, 102.4; pulse, 130.

Third day—10 a. m.: Glucose, 2,000 cc. intravenously. 10 p. m.: Glucose, 2,500 cc. intravenously. Temperature, 101.4; pulse, 106.

Fourth day—10 a. m.: Glucose, 1,150 cc. intravenously. 6 p. m.: Glucose, 1,650 cc. intravenously. Temperature, 100.8; pulse, 96.

Fifth day—About the same as above.

Sixth day—Same as above. Water freely by mouth, syphoned off by nasal tube. On the evening of the sixth day, mineral oil, two ounces, instilled rectally. No enema had been given up to this time. Intravenous glucose continued. Broth and strained fruit juices by mouth. At first they were syphoned off by the tube, but later the tube was clamped for fifteen minutes and then opened. As this caused no upset, it was then clamped for longer periods after taking various fluids.

Seventh day—S. S. enema given and first bowel movement obtained since operation. Fluids now handled by mouth, so intravenous and hypodermoclysis discontinued.

Eighth day—Stomach tube removed.

From this point on the progress of the patient was uneventful, his diet being gradually increased to regular tray.

He was discharged from the hospital in good condition on the twenty-third day, and has since resumed his duties as a traffic officer.

Comment.—This patient owes his life to the fact that he was operated upon immediately, for otherwise he would have died of hemorrhage. Moreover, a delay would have increased his chances of succumbing to peritonitis had not the hemorrhage been fatal.

COMMENT

The closure without drainage certainly lessened his chances of postoperative hernia, wound infection, and adhesions. This point is not agreed upon by surgeons, and according to questionnaire replies from members of the American College of Surgeons, as published by Rhodes and Fernald in February of this year, more would have drained than would have closed without drainage. Rhodes, I think, rightly concludes that:

1. It is impossible to drain the abdominal cavity adequately.

2. Drainage probably aggravates the spread of infection.

3. Drainage encourages the formation of adhesions.

4. Drainage prolongs healing and predisposes to hernia.

5. Drainage increases the chances of fecal fistulae.

The liberal quantities of glucose and saline, I feel, are extremely important, for fluids are essential, saline is needed to replace losses where continuous suction from the stomach is prolonged, and the glucose furnished valuable, ready to use, calories.

The continuous suction certainly has been a tremendous aid since its introduction, and not only adds to chances of recovery but adds greatly to the patient's comfort, permitting him to take fluids by mouth freely, where, as in this case, vomiting was eliminated and distention minimized.

The length of time the intestinal tract should be kept as nearly at rest as possible varies with the level of the perforations.

The systematic examination of the intestinal tract is extremely important, for it is very easy to overlook some lesions. Out of twenty autopsies performed in Wilson's series of cases that had been operated upon, he was surprised to find that in ten cases visceral injuries had been overlooked at the time of operation. Billings and Walking reported nine cases of overlooked injuries in forty-five autopsies. Anyone who has had experience in operating upon these injuries can appreciate how easily this error may be committed. The patient is in a critical condition, the field is somewhat obscured, and the operator must complete his job in the shortest possible time.

Resection of bowel should be avoided unless it is imperative, for it adds greatly to the mortality. In every case in Prey and Foster's series necessitating resection of intestine, the patient died.

The postoperative care and nursing are extremely important factors in these cases, but no amount of it will take the place of early operation.†

Medical Building.

DISCUSSION

George K. Rhodes, M. D. (490 Post Street, San Francisco).—The case histories submitted by the authors in their review of this problem are excellent examples of the difficulties encountered.

The surgeon who assumes the care of these patients must exercise his keenest judgment in (*a*) preoperative diagnosis, (*b*) preoperative preparation, (*c*) operative technique, and (*d*) intelligent postoperative care.

Preoperative Diagnosis.—We must always keep in mind the topographical anatomy of the abdominal cavity and its associated organs. I have seen several fatal issues in which a gunshot wound of the fifth or sixth interspace was wrongly diagnosed as entirely a chest wound, and so conservatively treated. We must remember that any gunshot wound of the left chest, as high as the fourth interspace, has probably also penetrated the stomach. The range of the bullet indicates the probable structures involved, and also directs the location of the exploratory incision. If there is no point of exit, the x-ray should be used to determine the course of the bullet. X-rays are also of great value in showing a pneumoperitoneum which, if present, indicates a perforation of the gastro-intestinal tract. Each patient should be catheterized to rule out involvement of the genito-urinary tract. The physical examination of each patient will, of course, vary, due to many factors, such as the psychic phases, amount of hemorrhage, and the character of the contamination from the gastro-intestinal tract. Generally speaking, perforations of the empty cardiac end of the stomach may show very little immediate evidence of general peritonitis; however, those of pyloric end may simulate a perforated peptic ulcer. The more fluid content of the small bowel usually gives more peritoneal irritation than that of the more solid content of the large bowel. These factors are, however, largely for academic discussion. The diagnosis of even a possible gunshot wound of the abdomen justifies an immediate laparotomy. It is far easier to explain negative laparotomy findings to the patient than to give excuses to the coroner.

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† The writers are indebted to Dr. E. Larson for his assistance in the operating room on Case 4.

Preoperative Preparation. — The simpler methods of combating shock are often the most efficacious. Psychic rest, warmth, and sedatives should be a routine. If the patient's condition seems alarming, these measures may be supplemented by administration of fluids by clysis or intravenously. It is obvious that the too free and rapid use of fluids and circulatory stimulants are to be avoided, for they may defeat nature's attempt to control the internal hemorrhage at its source. When the operation is begun, the fluids may be given with greater safety. The dangers of severe hemorrhage before and during operation must be anticipated, and the patient's blood grouped and several possible donors made available.

Operative Technique.—Operations of this type often tax the skill and judgment of the most experienced surgeon. The novice in surgery with poor hospital facilities will probably do more harm than good in most instances. With most patients, novocain block, supplemented by ether or gas and oxygen, will be the anesthetic of choice, for complete relaxation affords the best opportunity for adequate exploration. In specially selected cases spinal anesthesia is most preferable. Surgery should consist of (*a*) immediate control of hemorrhage; (*b*) systematic and thorough exploration of the gastro-intestinal tract from esophagus to anus; and (*c*) control of hemorrhage from spleen, liver or kidney. Perforations should be closed, taking care not to occlude the lumen. If several perforations be found in a given segment, it is usually better to resect.

I heartily agree with the authors regarding the advisability of closing these cases without draining the abdominal cavity. This has been our policy in the San Francisco Emergency Hospital for several years, and our very, very low mortality is undoubtedly due in no small measure to this practice of nondrainage. The abdominal wound and retroperitoneal spaces should be freely drained to avoid severe and sometimes fatal sepsis from streptococci and anaerobic infections.

Postoperative Care.—These patients must be given intelligent postoperative treatment for spreading peritonitis, even though it never manifests itself. The Connell suction type of drainage through a nasal tube is undoubtedly our best prophylactic measure against paralytic ileus and postoperative mechanical obstructions. The fluid and salt balance should be maintained to the extent of 3,000 to 4,000 cubic centimeters a day.

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H. Glenn Bell, M. D. (University of California Hospital, San Francisco).—The points brought out by Doctors Binkley and Cole are well taken. One only has to work for a time in an emergency hospital in a large city to realize that many of the patients with gunshot wounds may show little or no clinical evidence of injury to a hollow viscus. At operation, however, one finds several perforations of the bowel. At times it is difficult to convince the patient that operation is necessary. In the examination one should not forget to percuss the liver to see if dullness is absent because of gas under the diaphragm. The use of a catheter will almost always indicate the presence or absence of an injury to the genito-urinary tract. At the Cincinnati General Hospital there was a hard-and-fast rule that, in every case of gunshot or stab-wound of the abdomen, a laparotomy must be performed unless it could be proved beyond doubt that the peritoneal cavity had not been entered. Such proof was hard to obtain without operation. Many times we found perforations when we did not expect them. Another requirement was that lavage of the stomach must be done before surgery, if general anesthesia were used. If a patient has a full stomach, as many of these have, he may vomit under anesthesia, with disastrous results.

In operating, Doctors Binkley and Cole stress the care which must be used in making sure that no perforation is overlooked. I should like to remind you that much time may be saved by closing the abdomen with through-and-through silver wire sutures instead of in layers, as pointed out by Halstead, Reid, and others. These men, too, felt that the abdominal cavity should not be drained; with this view I agree absolutely.

It seems to me that the doctors have outlined the correct procedures in handling these cases even though they were able to carry them out in only one case. Their case reports indicate clearly the many difficulties in the way of proper treatment, and the outside influences which must be considered. In two cases there were, perhaps, too many consultants; in one case the family prevented proper treatment.

⁂

John Homer Woolsey, M. D. (Woodland Clinic, Woodland).—Gunshot wounds of the abdomen are not as well handled as they could be, and so a paper covering the subject in an attractive and instructive manner, with illustrations of and comments upon the two types of medical attention given, is most worth while.

The "watchful" or "prayerful" waiting attitude assumed in instances of gunshot wounds of the abdomen is exactly as logical as the ostrich fleeing from danger by burying its head in the sand. Prompt, thorough, and careful exploration is paramount, but it should not be done until after proper preoperative study. In order to prevent additional shock, the abdominal viscera should be gently manipulated by inspecting a section of intestine at a time and returning it to the abdominal cavity, while warm, moist packs are kept over all exposed viscera.

A proper preoperative study includes an examination of the blood picture, the blood pressure, and the pulse rate; a study by roentgen rays as to the course or position of any foreign body, and thereby locating the viscera or tissues which might be involved; an examination for hematuria in case of a possible bladder or kidney injury; an examination of the voluntary movements and the deep reflexes for possible spinal-cord injury.

Shock is present in the majority of these injuries, so preparation should be made to give fluids or blood transfusions at once, or during the surgery, as indicated. A wide choice in anesthesia allows one to proceed early. A spinal anesthesia not higher than the fifth thoracic is our choice. Contamination occurs in the first few hours, and inflammatory process develops later; so the more prompt the surgery, the better the chance for primary healing and a successful outcome for the patient.

⁂

Doctor Binkley (Closing).—I was glad that Doctor Rhodes mentioned x-rays to show pneumoperitoneum, for at times we do get striking pictures that are pathognomonic. These may be taken with the patient in the upright position or on the side, and if positive there is no doubt; but if negative there is still doubt, and in either case laparotomy must be done. I agree that if the delay or the handling of the patient are not contraindicated, the procedure is of academic interest and should be done.

POISONING POISONOUS SPIDERS*

AN EXPERIMENTAL INVESTIGATION IN THE CONTROL OF THE BLACK WIDOW SPIDER (LATRODECTUS MACTANS)

By Emil Bogen, M.D.
and
Russell N. Loomis, M.S.
Olive View

Discussion *by Russell M. Gray, M.D., Indio; George Elwood Jenks, Los Angeles; W. J. Baerg, Arkansas.*

Poisoning from the bite of the black widow spider has been reported with increasing frequency in recent years. More than two hundred cases have been tabulated by thirty different writers since 1932, bringing the total recorded to date to over six hundred. Several deaths from this cause are now being listed annually in one state alone, and no part of our country appears to be entirely free from this dangerous creature. Part of the increase in the number of bites recorded is undoubtedly due to the wider appreciation of their possibility, with the consequent recognition of cases that would have been otherwise missed, both by the physician and by the public. A part may be ascribed to the change in habitat of many of these spiders from rural to urban sites, with consequent increase in the opportunities for human contact. Many workers, however, believe that there has been a real increase in the number of these spiders throughout the United States, either because of weather conditions, and more abundant food supply, or because of the destruction of the natural enemies of the spider.

SYMPTOMS

The publication of more than a score of articles annually since 1926 dealing with this subject has undoubtedly contributed much to awaken the medical profession to the possibilities of diagnosis of this condition. The typical history of a bite by a black widow spider, followed within an hour by increasing pain and muscle spasm, leading to a picture simulating an acute abdominal condition, with rigidity, fever, leukocytosis, and even nausea and vomiting, is becoming recognized as a distinct clinical entity. The presence of muscle spasms in the extremities, the increased blood pressure and spinal fluid pressure, the absence of true tenderness in the painfully contracted muscles and the profuse perspiration, aid in the differential diagnosis. Such exceptional manifestations as shock or circulatory collapse, local or generalized skin eruptions, edema or necrosis, and residual nerve lesions, although occasionally reported, are not commonly encountered and should not be stressed in the description of the usual case.

TREATMENT

Effective treatments for patients suffering from arachnidism, or black widow spider bite poisoning, have been developed during the past decade, but are still too little known by the medical profession at large, and articles still report and advise the application of the numerous ineffective treatments of the past. The mental reassurance and avoidance of operative intervention that follows making the correct diagnosis gives this procedure a real therapeutic value. Local treatment should be confined to a simple antiseptic application, as the scarification and cauterization or suction useful in other kinds of venomous bites have no value in this condition.

Pain.—Relief of pain may be secured by the use of hydrotherapy, by spinal puncture, by the intravenous injection of 20 cubic centimeters of a 10 per cent solution of magnesium sulphate, and especially by the intravenous injection of 10 cubic centimeters of 10 per cent calcium chlorid or the intravenous or intramuscular injection of 10 cubic centimeters of a 10 per cent solution of calcium gluconate, more effectively than by the administration of opiates or other sedatives.

Serum Treatment.—Serum treatment has been developed against the bite of the black widow spider, both with the use of human serum from subjects who had previously recovered from a typical case of spider-bite poisoning, or with serum obtained from small animals that had been subjected to the bite of the spider and had recovered. No commercial sources for such serum are now available, but in particularly severe cases it may be obtained from the Los Angeles General Hospital, or from Dr. F. E. D'Amour of Denver, or from the Olive View Pathology Laboratory. The results, while still encouraging, are not conclusive, and in view of the fact that institutions using the other modern treatments report scores of cases with no deaths, and with rapid amelioration of symptoms, the general use of such serum is probably unnecessary.

BLACK WIDOW SPIDER'S FOOD

The black widow spider obtains its nutrition solely by sucking the body fluids out of the still living victims, utilizing for this purpose its own offspring as well as its mate or others of its species, other arachnids, and a wide variety of insects, including the common house fly, other flies, crickets, moths, grasshoppers, beetles, etc. Occasionally, even small vertebrate forms may be attacked. Usually the spider attempts to entangle the victim in its web, and tie it up well, then taking its meal off the still living victim at leisure. The venom of the spider is probably especially useful in paralyzing victims while they are being thus wrapped for later consumption. Although in its rôle as destroyer of flies and other noxious insects the black widow may be of service, it would seem that other safer measures should be preferred.

NATURAL ENEMIES OF THE SPIDER

Natural enemies of the black widow are numerous, but seem to play a restricted rôle in limiting their numbers. Birds and lizards probably destroy a few of the spiders, but owing to the habits and habitat of the black widow few of them are accessible to these agents. Wasps, particularly the digger or mud-dauber wasps of the Sphex genus, make use of the black widow as food for their

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* Paper presented before the American Chemical Society, San Francisco, August 22, 1935.

TABLE 1.—*Poisonous Spider Bites in the United States, 1935*

State	Reports	Cases	Deaths	State	Reports	Cases	Deaths
Alabama	6	53	0	Nebraska	1	0	0
Arizona	2	0	0	Nevada	1	0	0
Arkansas	2	6	0	New Hampshire	1	0	0
California	26	350	30	New Jersey	0	0	0
Colorado	5	2	0	New Mexico	1	0	0
Connecticut	0	0	0	New York	2	2	0
Delaware	0	0	0	North Carolina	7	14	2
Florida	5	43	0	North Dakota	1	0	0
Georgia	6	11	0	Ohio	2	2	1
Idaho	1	2	1	Oklahoma	1	2	1
Illinois	2	4	0	Oregon	1	0	0
Indiana	1	0	0	Pennsylvania	3	3	1
Iowa	1	0	0	Rhode Island	0	0	0
Kansas	5	3	1	South Carolina	1	1	0
Kentucky	1	1	0	South Dakota	1	0	0
Louisiana	4	17	0	Tennessee	2	5	0
Maine	1	0	0	Texas	7	15	0
Maryland	2	2	0	Utah	1	0	0
Massachusetts	2	2	0	Vermont	0	0	0
Michigan	2	0	0	Virginia	13	73	1
Minnesota	1	0	0	Washington	2	1	0
Mississippi	1	0	0	West Virginia	1	1	0
Missouri	1	0	0	Wisconsin	1	0	0
Montana	2	0	0	Wyoming	1	0	0

Total........................130 reports, 615 cases, 38 deaths.

Spider reported in 43 states. Cases in 24 states. Deaths in 8 states.

young, and probably are a much more important factor in their control. Scorpions, solpugids or vinegaroons, centipedes and tarantulas, as well as the mole cricket and certain other insects, may sometimes kill the black widow; but in nature such encounters are probably uncommon, and the victory may be on either side. Several insect parasites on the egg of the spider have been described, but none seems to be as yet of real importance. Diseases of the spider are quite unknown, though certain fungi are occasionally found growing on defunct specimens.

The control of the black widow spider has, hitherto, received little serious investigation. The casual references to the effects of certain agents are, on investigation, often found to be inaccurate and misleading. In view of the increasing recognition of the dangers of poisonous spiders, and the frequent inquiries as to what to do about them, it was thought desirable to undertake a systematic investigation into the possibilities of destroying them.

DESTRUCTION OF SPIDER BY MECHANICAL MEASURES

Mechanical measures for the destruction of the spider are most generally advised. The broom, fly-swatter, shoe, or stick, have all had their quota of victims. In handling the egg sacs, it may be well to remember that the spiders may be alive, hatched in the sac for days before they emerge, and that the careless opening of the egg sac may be the signal for the emergence of hundreds of spiderlings. The difficulty of reaching the spider in inaccessible places by such simple mechanical means, the danger of damaging other property, breaking windows, etc., and the low visibility of the spider in its usual dingy and sheltered habitat, all detract from the general application of simple mechanical measures, which remain, however, the most effective so far discovered.

The spider appears little sensitive to odors, sounds or sights, but is affected by bright moving lights and particularly by vibration or mechanical stimulation. It has a slight negative phototropism, preferring the dark times and places, and a slight negative geotropism, so that it hides in the higher portions of the webs, but these tendencies are often not exhibited. It prefers a secluded, undisturbed location, and will often move elsewhere if repeatedly disturbed, or if its web is repeatedly broken.

HOW BLACK WIDOW SPIDER BITES MAY BE AVOIDED

The avoidance of the bite of the black widow spider depends primarily upon avoiding contact with the spiders. In earlier times, they were most

TABLE 2.—*Closed Jar Method*

	Lethal	Time Killed—Minutes			
	for Mice	Amount Used Gm. or Mils.			
Substance	0.1 Gm.	1.0	0.1	0.01	0.001
Acetone	......	 x	......	......	......
Amyl alcohol iso	No	86	273	348	x x x x x
Benzaldehyd	Yes	97	373	103	1100 1150
Benzene	No	19	30	x x x	......
Black Leaf 40	Yes	116	x x x	....	......
Butyl alcohol N	No	122	x x x	....	......
Calcium cyanid	Yes	......	4, 10, 10 16, 18	92	109
Carbon disulfid	No	40	....	x x x	......
Carbon tetrachlorid	No	12, 20	10, 26	x x x	......
Chloroform	No	30	102	x x	......
Cresol	Yes	112	118	x x	......
Creosote, beechwood	Yes	165	......	....	......
Creosote, carbolic acid	No	236	x x x	....	......
Creosote, coal tar	Yes	1020	x x x	....	......
Destruxol	Yes	22	116	189	x x
Dichlorobenzene (o)	Yes	161	369	x x x	......
Dichlorobenzene (p)	No	......	10, 60	334	......
Digas	No	1440	......	......	......
Dimethylanilin	No	59	130	129	1100 1150
Ethyl alcohol	No	233	x x	......	......
Ether	No	205	x x	......	......
Formaldehyd	Yes	168	......	......	......
Gasoline	No	......	120	......	......
Grainosect	No	351	1085	x x	......
Hexyl alcohol N	No	113	1073	x x	......
Hunt's insect powder	......	150	1087	1088	x x
Kerosene	No	342	x x	....	......
Lethane 10 per cent	Yes	320	281	x x	......
Lysol	No	343	x x	....	......
Methyl alcohol	No	235	x x	....	......
Mono-chlorobenzene	Yes	30	54	90	x x
Mustard oil	Yes	....	205	x x	......
Naphthalene	Yes	....	120 x x	373	x x
Nitrobenzene	Yes	x x	......	......	......
Pharo spider kill	No	277	306	x x	......
Phenol	Yes	39	135	164	x x
Pine oil	Yes	x x	x x	......	......
Potassium cyanid	Yes	273	110	1062	x x
Premek spidercid	Yes	1145	x x	......	......
Propyl alcohol iso	No	77	291	x x	......
Pyrethrum powder	......	x x	x x	......	......
Pyridin	Yes	1440	......	......	......
Pyrocid 20	No	1440	......	......	......
Sodium cyanid	Yes	140	1065	1256	x x
Sulphur	......	x x	......	......	......
Sulphur dioxid	......	....	5, 8	14, 15, 28 39, 46, 60	x x x x x x
Tuolene	No	60	53	x x	......
Triocresylphosphate	No	x x	....	....	......
Union garden spray	Yes	x x	....	....	......
Vaposector fluid	No	203	....	....	......
Xylene	No	59	77	70	x x x x

"x" means negative experiment.

often reported in the fields, in bushes, under twigs or logs, and in other rural sites. Their webs have been found in the tunnels of ground squirrels and other burrowing animals, where they may be protected during the cold winters. They have also been found under stones or rocks or in the crevices in stone walls. Intensive cultivation of the land makes these sites less tenable. Most of the earlier human victims were bitten while in wooden outdoor privies, by the spiders which had built their webs under the seat. Making the seats of outdoor toilets on hinges so that they may be inspected and cleaned on the underside, has been accordingly recommended. Wherever possible, outbuildings should be well lighted and screened. The young black widow may pass through ordinary fly screen, but it is not so apt to make its web in places where other forms of life cannot be found for food.

More recently the black widows have been described in garages, chicken-houses, on porches, under chairs, tables, or stairways, under the eaves and beneath the rafters in cellars and attics, in shelves and closets, and under boxes, boards and

TABLE 3.—*Spray Method*

Substance	Solvent	Time Killed in Minutes			
		100 per cent	10 per cent	1 per cent	0.1 per cent
Acetone	......	x	......	......	......
Ammonium thiocyanate	aq	......	x x x x x x	......	......
Amyl alcohol iso	aq	......	1100, 1100, x x x x	......	......
Amyl alcohol iso	oil	x x x	10, 10, 11, 17, 19, 20, 37, 43, 43, 173, x	6, 7, 11, 13, 14,16, 30, 1,440	5, 11 11, 26, x x
Antimony Pot. Tart	aq	......	x x x x x x	......	......
Benzaldehyd	......	x x x	......	......	......
Black Leaf 40	aq	51, 240, 420, 1440	20, 27, x x x	......	......
Butyl alcohol N	......	21, x	......	......	......
Calcium chlorid	aq	......	x x x	......	......
Calcium cyanid	aq	......	......	236, x x	......
Calcium cyanid	oil	......	6, 7, 9, 10, x x	......	......
Calcium oxid	aq	x	x x	......	......
Calcium oxid	oil	......	14, 62, 1080 1080, x	......	......
Calol spray oil	......	xxxxxxxx	......	......	......
Carbon disulfid	oil	x x x	20 x	......	......
Carbon tetrachlorid	......	x x x x	......	......	......
Cobalt chlorid	aq	......	23, 30, 1440 x x	......	......
Cresol	oil	......	x	......	......
Creosote, beachwood	oil	......	x x x x x x x x	......	......
Creosote, carbolic acid	oil	......	19, 54, 994 994, 994, x	......	......
Creosote, carbolic acid	aq	......	19 x x x x	......	......
Creosote, coal tar	oil	......	8, 21, 170, 176, x 17, 17, 19,	......	......
Destruxol	aq	......	19, 20, 20	x x x	......
DiGas	......	10, 17, 17	......	......	......
Dimethylaniline	oil	......	5240, 1440, x	x	x
Ethyl alcohol	aq	x x	x	......	......
Exit insect spray	oil	13, 13, x	1400	......	......
Formaldehyd 37 per cent	aq	7, 9, 22, x x	x	......	......
Gasoline	......	x x x x	......	......	......
Grainosect	oil	3, 12, 28	9	......	......
Hexyl alcohol N	aq	14, 14, 20 20, 26, x	x	......	......
Kerosene	oil	11, 14, 15, 16, 16, 16, 18, 20, 23, 106, ...	11	......	......
Kerosene and CaO 15 per cent	......	11, 16, 18, 23, 28, 32	......	......	......
Lethane	oil	38	12, 16, 20	18, 55	12, 12, 30, x
Lysol	aq	29	360, 1440 x x	......	......
Methyl alcohol	aq	x x	x	......	......
Monochlorobenzene	aq	x x	x	......	......
Mustard oil	oil	......	......	17, 300, x	57, 29, x x x
Naphthalene	oil	x x	x x x x	......	......
Nico dust	......	x x x x	......	......	......
Nitrobenzene	......	17, 52, x	......	......	......
o Dichlorobenzene 50%	oil	10, 17, x x x	......	......	......
p Dichlorobenzene 50%	oil	......	......	......	......
Pharo spider kill	......	18, 18, 31 191, 240	......	......	......
Phenol	aq	......	1080 x x	......	......
Pine oil	oil	......	x x	......	......
Potassium cyanid	aq	......	24	......	......
Potassium thiocyanate	aq	......	1000, 1000, x x x	......	......
Premek spidercid	......	2, 14, 31, 33, 40, 42	......	......	......
Propyl alcohol iso	......	x x	......	......	......
Pyrethrum powder	......	x x	......	......	......
Pyridin	aq	12	......	......	......
Pyrocid 20	oil	5, 9, 11, 12 15, 19, 19, 23, 31, 32, 42	15, 35, 37, 59, 72	60, 69, 72, x x	......
Soap solution	......	x x x	......	......	......
Sodium arsenite	......	37, 71, 150 1080, 1080 x x x x x x	......	......	......
Sodium cyanid	......	37	......	......	......
Sodium fluorid	......	x	......	......	......
Steam 92°C	......	1/30, 1/30	......	......	......

(Table continued on next page)

Table 3.—*Spray Method—(Continued)*

Substance	Solvent	Time Killed in Minutes			
		100 Per Cent	10 Per Cent	1 Per Cent	0.1 Per Cent
Sulphur	......	x x x x	....	....	....
Toluene	......	x	....	....	....
Triocresyl phosphate	oil	7, 990, 990, x	6, 7, 9, 840, x	....	....
Union garden spray	aq	2, 4, 4, x	x x x x	....	....
Vaposector fluid	......	6, 20, 24	....	....	....
Water	......	x x x	....	....	....
Xylene	......	x x x	....	....	....

"x" means negative experiment.

rubbish heaps in general. Accordingly, all rubbish heaps should be destroyed and dark, cluttered corners in cellars, attics, garages, etc., should be cleared up as much as possible. Frequent forays, destroying the webs and killing spiders when seen, may discourage them from making their home near human habitations.

The wearing of white gloves, a single thickness cotton glove such as is sold at the ten-cent store, is sufficient; wearing white clothing against which the black spiders may be easily detected, a large white hat or cap, a collar turned up at the neck, and trouser legs closed at the bottom, or knickerbockers, may be recommended while working in the vicinity of the spiders. A mosquito or bee net over the face may sometimes be advisable, particularly when crawling under houses or in other dangerous places.

Fire has been used as a means of exterminating the black widow, but it is usually of limited value. Rubbish piles may be burned as a preventive, but the spider is usually quick enough to escape the flame unless closely watched. Although certain spiders have been reported to skip over boiling water at hot springs, it appears that the black widow is more susceptible to heat, and under certain conditions boiling water or steam may be used effectively to get rid of them. On the other hand, drowning with water or a bland oil usually leads to merely temporary cessation of movement, the spider feigning death, but coming to life and activity again when it dries.

TECHNICAL PROBLEMS

The evaluation of insecticidal, or rather arachnicidal properties of substances against the black widow is fraught with unusual difficulties. Postmortem movements of the spider, especially under the influence of air currents or when a wisp of web attached to one of its legs is touched in an invisible portion, often makes it appear as if the spider were alive long after death has occurred. The characteristic contracted death posture, sometimes helpful in this direction, may be absent after some modes of killing. On the other hand, the practice of feigning death, an instinctive ruse with the spiders when disturbed, often misleads the observer into thinking that the spider is dead when it is only "playing possum." Although the spider may continue to mimic death in the presence of chemicals, or when shaken or turned over in the jar or cage, irritation of her body, particularly the cephalothorax, with a firm, fine, wire point. almost invariably causes active movements. Such tickling of the spider, therefore, forms a valuable aid in determining that it is really dead.

The restricted dietary of the spider, consisting only of the sucked-out body fluids of living insects, makes it escape most of the common stomach or feeding poisons placed in its vicinity, while its ability to "hold its breath," and low respiratory requirements, makes it resistant to many respiratory poisons which are effective against common insect pests. The hard, chitinous covering of the spider is resistant to many contact poisons, and its ability to shed a leg and to regenerate a new one enables it to escape many mechanical injuries.

EXPERIMENTAL PROCEDURES IN FUMIGATION

The varied natural habitat of the spider makes it inaccessible to many simple measures. No one method has been found which is equally effective under all circumstances. The duplication, in laboratory conditions, of the natural habitat was found difficult and uncertain. For this investigation, after a number of attempts with various set-ups, two types of experimental conditions were studied—the closed-jar method to determine fumigating efficiency of the different substances in a completely enclosed space, and the open-cage method to determine the efficacy of simple contact sprays.

For the study of the fumigating action of substances against the black widow, glass jars 6½ inches high and 2¾ inches in diameter, with a capacity of 500 mils and with a tight-fitting screw lid, were used. The spiders were placed in the jars, and allowed to spin a web in the bottom of the jar. The jars were then inverted and the lids removed, the spider then remaining in the web at the top of the inverted jar. The substance to be tested was then placed on a small piece of cotton on the lid, and covered with screen wire to prevent the spider coming in direct contact with the material. The lid was then screwed back on the jar, and kept in an inverted position, thus placing the spiders about six inches from the substance tested. The time was recorded, and a careful watch maintained for many hours for the time when the spider might drop from the web, and also when all signs of life might disappear, so that the duration of exposure required to kill the spider might be recorded. Varying amounts, 1.0, 0.1, 0.01, 0.001 and/or 0.0001 grams or mils of the substances tested, were used, diminishing the amount until the killing power was lost.

INSECTICIDAL MIXTURES

More than fifty different pure chemicals or mixtures were tried by the closed-jar method. For convenience these are divided into five groups.

1. The following substances failed to kill the spiders, even in concentrations of one gram to the jar, the highest amount used:

Acetone, antimony potassium tartrate, calcium oxid, calcium chlorid, calol, cobalt chlorid, soap solution, sodium fluorid, sulphur, nitrobenzene, pine oil, pyrethrum powder, triorthocresyl phosphate, Union garden spray, water.

Despite the fact that several of these have been highly lauded as effective for killing spiders, as well as insects, our experiments indicate that they are far too weak to be of any value for fumigating purposes against the black widow.

2. The following substances were found effective in concentrations of one gram to the jar, but not less, which would correspond to about two ounces per cubic foot:

Alcohol, methyl, ethyl, and butyl; Beechwood creosote, carbolic acid creosote, or crude coal-tar creosote; carbon disulfid, sulphuric ether, formaldehyd, kerosene, lysol, black leaf 40, Digas, Premek spidercide, pyrocid 20, vaposector fluid.

Although some of these agents may still be of value if placed directly on the spider, they cannot be expected to be very effective as fumigants when merely placed in the vicinity of the spider. In view of the reports that they might act as repellants, causing the spider to go elsewhere, some of them were placed in double jars containing spiders, the jars being connected at the necks so that they afforded a total length of more than a foot. There could be noted little tendency of the spiders to go away from the materials. Since the concentrations of these substances required to kill the spiders is higher than would be developed in the open, it is felt that little reliance may be placed on the use of these substances, particularly the creosotes, as safeguards of outdoor privies and similar locations.

3. Substances somewhat more effective, capable of killing in amounts of 0.1 gram per jar, or about two grams per cubic foot, included:

Alcohol, isopropyl and n. hexyl; benzene, carbon tetrachlorid, chloroform, gasoline, grainosect, lethane, mustard oil, o-dichlorobenzene, Pharo spider kill, pyridin, toluene.

The amounts of these substances required for fumigation purposes against the spider are still excessive for practical use.

4. As little as 0.01 gram per jar, or about a pound for a small room, was sufficient for the following substances:

Alcohol, isoamyl; cresol, Destruxol, Hunt's insect powder, mononitrobenzene, naphthalene, paradichlorobenzene, phenol, potassium cyanid, sodium cyanid, sulphur dioxid, xylene.

5. Even smaller amounts sufficed for calcium cyanid, benzaldehyd, and dimethylanilin.

SPRAYING METHODS

The usual habitat of the spider is inaccessible to closed fumigation methods, as sufficient concentrations of the fumes cannot be obtained to be effective. A spray may be expected to give better results under such conditions and, accordingly, a method was devised for spraying the spiders in the open air under constant conditions, in special wire cages, as follows: Small wire cages, three and one-half inches tall and two inches in diameter, were made of one-eighth inch wire mesh hardware cloth, closed at the bottom with screen wire and at the top with a large stopper or tin lid. The spiders were placed in the cages, the cages suspended freely, and the substance to be tested sprayed at the spider through a No. 16 De Vilbiss atomizer at a distance of about two inches, usually giving two or three bulbsful of air to each substance, or about 60 cubic centimeters of spray. The time of spraying was noted, and the spiders examined repeatedly so that the time when all signs of life disappeared could be recorded. In order to guard against feigned death, the spiders were irritated with a small wire from time to time.

It was soon realized that no spray could be effective if it did not actually reach the spider, and that no substance so far tried would have any effect if merely sprayed on the web or in the vicinity of the spider. Some sprays appeared to irritate the spider and increase its motions, but these were not entirely consistent. The light spraying of the atmosphere, so effective with fly sprays of pyrethrum against the common house fly, is useless against the black widow.

Inasmuch as a heavy spraying must be used, the inhalation of the spray by the person using it is almost unavoidable. There must be care, therefore, to avoid the use of substances that might be toxic to the user. Cyanid sprays are accordingly ruled out from the start, although they are perhaps the most effective.

Isoamyl alcohol and lethane, although both quite effective and of comparatively low animal toxicity, both may give rise to headaches and other symptoms if inhaled in high concentrations. By the use of lower concentrations, such as one per cent of these in kerosene, however, this disadvantage is reduced, and perhaps the most effective sprays to be advised are these. Numerous commercial sprays tested were generally weaker than these two. Aqueous sprays were, unfortunately, quite disappointing in their results, 10 per cent sodium arsenite and cyanids being the only effective aqueous agents found. The addition of lime was not found to have any effect on the potency of kerosene.

CHOICE OF FUMIGANT

There are many factors affecting the choice of a fumigating agent after its effective concentration has been determined. Most important is the possible effect on the life and health of humans and animals who may be exposed to it, accidentally, or before, during and after the fumigating process. As a crude test of the dangers from these agents, 0.1 cubic centimeter of each substance was injected subcutaneously into a laboratory mouse. Those causing death in the mice within a few days may be readily suspected of being dangerous if used without special precautions.

Not only the drugs that kill mice, however, require scrutiny. A number of other substances, sublethal in effect, are capable of producing profound damage, headaches, liver injury, etc., to all or certain susceptible exposed individuals. Such dangers to health require primary consideration.

The danger of fire or other damage to property is also important. Highly inflammable substances must, therefore, be used with caution. Most fly sprays are of mineral oil or kerosene bases, and are inflammable. Many organic substances may form explosive mixtures with air.

The danger of corrosion, bleaching, injury to plants and other materials must also be considered.

The cost of the substance to be used, both absolute and relative to the task required, and its ready accessibility and keeping properties, also merit consideration. The effect of temperature, of humidity, and the ease of application of the material, likewise need some thought.

CONCLUSIONS

In general, we may conclude, on the score of effectiveness, cheapness, safety and simplicity, that, for fumigation purposes against the black widow, the following recommendations may be made:

1. For small boxes, chests, and similar enclosed spaces, naphthalene, the commercial moth-ball material, be used in amounts of two ounces of naphthalene to each cubic foot of space free.

2. For large, completely sealable chambers, fumigation with sulphur dioxid from sulphur candles, using a pound of sulphur for every thousand cubic feet of space, for at least one hour.

3. For storage places, where safety of humans may be assured, cyanid, using three ounces of calcium cyanid for each thousand cubic feet space, for at least two hours.

4. For open spaces, such as outdoor privies, or under houses, no fumigant or repellant has been found that is to be relied upon.

5. No commercial preparation has been found that offers any prospects of significant value as a fumigant or repellant.

6. For spraying purposes, ordinary kerosene was found to be effective, but the addition of a small amount, 1 to 10 per cent, of isoamyl alcohol, or of the commercial organic compound lethane, added to the rapidity of its action. It should be emphasized that no spray is effective unless it actually reaches the spider, and the more thoroughly the spider is wet by the spray, the more certain and soon is its death. Spraying the empty portions of the web appears to be of no value with any of the materials we have used.

7. Mechanical measures remain the cheapest and most readily applied tactics to consider in the control of the black widow spider. Under certain special conditions steam, fire, and even electricity, may prove applicable, while fumigants and sprays, as just discussed, have definite indications and limitations. The danger of the black widow, however, is sufficiently great to warrant the employment of any or all of these measures, as may be best adapted to the individual conditions encountered, while it is to be hoped that insect enemies or other natural control measures may be developed in the future.*

Olive View Sanatorium, Los Angeles County.

DISCUSSION

Russell M. Gray, M.D. (Hotel Potter Building, Indio). During the past few years a great deal of publicity has been given to the black widow spider. This has been occasioned by the greatly increased number of spider-bite cases given prominence by the newspapers and other publications, and also the fact that the black widow spider has evidently spread all over the country. This apparent spread, or increase in number of black widow spiders, can only mean that the method of treatment of these cases must be improved, and must be brought to the attention of all practicing physicians. In addition to that, it behooves the medical profession and other scientists to develop some means of eradicating the black widow spider.

Doctor Bogen's article sets forth, in concrete form, many of the difficulties which are to be encountered in developing an insecticide or an arachnicide which will be effective, but at the same time not too expensive.

Experiments conducted along this line in the Coachella Valley Hospital laboratory have made us realize that this spider has very few natural enemies capable of eradicating the pest. The very fact that it is found in dark places, usually inaccessible to the other forms of insect life, and that the bite of the spider quickly paralyzes and causes the death of other insects, makes us realize we are going to have to turn to some artificial means, such as Doctor Bogen has attempted.

Fortunately for the human race very few spider bites assume alarming symptoms. The majority of the cases can be treated and controlled by simple remedies which are available in all hospitals and the majority of doctors' offices. It is the rare case—and apparently there have been several of these throughout the United States—where, in spite of all treatment, the patient is apparently doomed to die, to which we are particularly turning our attention in the endeavor to develop a specific. After seeing the extreme suffering of one of these severe cases, we realize no stone must be left unturned to develop an effective and inexpensive arachnicide.

Recent experiments conducted at the Coachella Valley Hospital laboratory tend to show (although this has not been definitely proved) that the spider whose habitat is in dark, damp places is more poisonous than the spider living in the open. Because of the fact that these spiders are usually found under the houses, in outdoor latrines, around garages, and in other spots where it is impossible to limit the air space, it takes very little imagination to realize the tremendous problem facing us in the control of this pest.

Doctor Bogen has initiated the beginning of a very interesting and, at the same time, useful field; but it will take a great deal of experimental work and many trials and errors before anything is found which will be universally available, and at the same time within the reach of all, for the eradication of the black widow spider.

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George Elwood Jenks (Spider and Parasite Research, Los Angeles County Health Department, Los Angeles).—"Poisoning Poisonous Spiders," by Doctors Emil Bogen and Russell N. Loomis, is so comprehensive and accurate that there seems to be nothing to add except, perhaps, a word about the recent successful propagation of the "lost" parasite—a rare and almost forgotten dipterous fly, the larvae of which feed upon the eggs of the black widow spider.

First found in Los Angeles in 1896, and described by Dr. A. Davidson in the *Entomological News*, Vol. 7, p. 320, Gaurax araneæ (Coquillett) apparently became so rare that it was practically lost to science for nearly forty years. When it was rediscovered two or three years ago, it was hailed by many scientists as a new species, but I was fortunate in obtaining the correct identification from

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* References will appear in the reprints.

P. H. Timberlake of the University of California Experiment Station at Riverside.

This parasite oviposits almost exclusively upon the egg-sac of the black widow spider. When the larvae hatch, they penetrate the shell of the egg-sac, devour the hundreds of eggs or spiderlings within, pupate, and eventually emerge as adults to complete the cycle. Apparently these parasites have been somewhat outdistanced by the abnormal increase of Lactrodectus mactans during recent years, and must have the "boost" of artificial propagation in order to become an effective check upon that increase.

Several workers found this parasite and began experimenting in 1934, possibly earlier; but for a long time no one was able to get these flies to thrive, mate, and propagate under artificial conditions. It was only after two years of experimental work in my home laboratory, and with the present aid of the facilities of the Los Angeles County Health Department, that I finally reached the place where I could be fully confident of ultimate success.

The artificial propagation of these parasites by the thousand is now an accomplished fact. Before, however, they can be bred by the required millions, there are several more problems to be solved, mainly in regard to the development of a more perfect synthetic food for the larvae.

Nevertheless, the work has now reached a point where it seems assured that biologic control, together with chemical and mechanical methods—*and* popular education—can ultimately be combined to provide a practical and effective remedy for the black widow menace.

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W. J. Baerg, Entomologist (University of Arkansas, Fayetteville, Arkansas). — Doctor Bogen has made another important contribution to the knowledge of poisonour spiders and he writes as one who has come into immediate contact with the subject.

The prevailing opinion that black widows have been rapidly increasing in numbers during the last two years, is based on facts, at least in the Middle West. Suggestions for so-called control measures are, therefore, much in demand, even though in some parts of the country spider-bite cases may be relatively uncommon. The presence of the black widow in even small numbers inspires fear, and there will be a widespread effort to reduce the sum total of this spider.

Natural enemies, such as other spiders, scorpions, wasps, and various predatores have been investigated by several research workers; but, in general, accounts agree that these preying insects play but a minor rôle. The blue mud-dauber, where it is abundant, is perhaps the most important of such natural enemies.

Severe winter temperatures are by some authorities believed to be fatal to black widows in the northern and central states; but, so far, evidence is lacking. Observations during the coming spring and summer may substantiate this opinion.

URINARY EXTRAVASATION*

By J. C. Negley, M.D.
Los Angeles

Discussion *by George F. Schenck, M. D., Los Angeles; A. A. Kutzmann, M. D., Los Angeles; H. C. Bumpus, Jr., M. D., Pasadena.*

URINARY extravasation, generally speaking, is an extensive destructive phlegmonous inflammatory process from pathologic conditions in or about the urethra, usually accompanied by gangrene of great extent, most often occurring after urethral disease such as stricture, calculi, abscesses, or periurethritis; but trauma, direct or indirect, with rupture of urethra or bladder, may play a part.

ETIOLOGY

Etiology most often occurs in urethrae weakened by stricture, with back-pressure making for dilatation and thinning of the walls with little resistance to infection. Unless a history and signs of recent trauma are present, one can most always be sure of an infectious origin. For convenience, the etiologic factors may be enumerated as follows:

1. Stricture (*a*) from antecedent disease, or (*b*) from scar tissue, following trauma.

2. Inflammatory process without stricture, as periurethritis, adenitis, littritis, cowperitis, periadenitis, with secondary necrosis and phlegmon.

3. The intact urethra without urinary infiltration, accompanied by massive phlegmonous gangrene, may simulate a true urinary extravasation so as to be indistinguishable from it until after operation. These cases, in my belief, are caused by the preliminary leakage of a few drops of infected urine, and the resultant edema, which closes off the opening; but the process goes on the same as though urine was present.

4. Trauma, direct or indirect, as from straddle falls, blows, automobile accidents, fractures of pelvis, hip, may lead to a slight laceration, a complete transverse severance of the urethra or rupture of the bladder. Many contusions, without actual disturbance of continuity, may prepare the soil for a virulent infectious necrotic process, which produces leakage and extravasation. Intercourse in those having stricture, in rare instances, may cause this condition.

5. Calculi, impacted so as to cause obstruction, may cause erosion necrosis enough to produce leakage.

6. Except in very immediate traumatic cases, bacteria play a major rôle. Colon, staphylocci, streptococci, and many varieties of anaerobes are mostly found. French observers have claimed that without the latter, gangrene cannot occur.

ANATOMY

To understand and correctly treat extravasation one must visualize the division of the pelvis into an external and internal compartment, with the triangular ligament at the dividing line. It is a dense fibrous wall, with a relatively thick anterior and thin posterior layer. The triangular ligament stretches across the pubic arch, attached in front to the symphysis pubes, laterally to the ischiopubic rami, which posteriorly offers insertion for Colles's fascia. Between the layers of triangular ligament are the nerves and blood supply of the penis, and within its borders are the membraneous urethra and ducts of Cowper's glands. Colles's fascia, sometimes called the superficial perineal fascia, is attached to the posterior border of the triangular ligament from which it sweeps back and down, separating the deep and superficial transverse perineal muscles, then forward under perineal, scrotal and penile skin, to fuse with the deep penile fascia at the root of the organ. This arrangement forms an anterior perineal triangular space open only at the base of the penis. Through this opening extravasation extends upward over the abdomen under Scarpa's fascia, which is the continuation of Colles's fascia over the abdomen. Scarpa's fascia, by its attachment to Poupart's ligament, prevents invasion of the anterior thigh. Therefore, extravasation anterior to the triangular ligament must be limited in the perineum by Colles's fascia, and on the abdomen by Scarpa's fascia. Thus the order of perineum, scrotum, lower abdomen, penis and groin extension is observed. Cases have been noted of extension to lower border of ribs and to axillae. Infiltration, originating behind triangular ligament, extends behind the prostate, invades the ischiorectal fossae, and may include the buttocks and inner upper aspect of the thighs, sometimes retroperitoneally to the kidneys. Intrapelvic infiltration, pointing anterior to urethra, results in a pre- or perivesical phlegmon.

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* Read before the Urology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

Infiltration between layers of triangular ligament may go either to front or backward, more often in front. Extension of the process in any location is dependent on the duration and virulence of infection.

PATHOLOGY

The onset is a cellulitis, with vascular thrombosis, gangrene and perforation, generally near an old stricture, a contused urethra, a hematoma with pressure gangrene, a laceration or severance of urethra. Once loose in the tissue, infected urine incites phlegmon. Injected sterile urine does not produce this process. French observers hold that actual urinary infiltration does not always exist, but that the process is by bacterial invasion only (anaerobic), and that the fluid found is only an acute inflammatory exudate. Others have demonstrated 2 per cent urea in the fluid from the tissues at operation, and have concluded that the fluid was always urine. Acute or chronic pyelonephritis is frequently a concurrent pathology, and is often the cause of death. Most always perforation of urethra occurs at site of, or posterior to, a stricture, either from mechanical pressure of urine or acute local infection; but the latter is always present except in early trauma.

SYMPTOMS

Local tenderness, swelling, chills, fever, mental confusion, delirium, coma, and other signs of overwhelming toxemia are always present to a greater or lesser degree. The intensity of the symptoms is generally graded on the extent and duration of the phlegmon. Urinary obstruction, with partial or complete retention, is marked by the usual symptoms of that condition. Dysuria, difficulty, dribbling, hematuria, frequency, small stream, burning, may all or part of them be present, and are always a predominating feature unless coma is present.

DIAGNOSIS

Generally these cases reach us late enough so that, from the first case on, the diagnosis is easily made, from inspection and palpitation. A bulging perineum, purplish red scrotum, spots of green to black gangrene, with the characteristic odor. The picture may also be present on the abdominal wall. Urethral catheter will often show obstruction. Conditions simulating extravasation are edema of scrotum, from cardiorenal disease, diabetic gangrene, strangulated hernia with gangrene or cellulitis of scrotum and abdomen, scrotal or penile gangrene from streptococcus cellulitis.

TREATMENT

1. Cystotomy at once, regardless of location of extravasation (*i. e.*, anterior or posterior), placing de Pezzar catheter in bladder.

2. Follow with parallel, free, wide, handsome incisions to the depth of process, and from the perineum to the costal margin if necessary, including penis, scrotum, perineum, and abdomen, is unavoidable. Connect these incisions by burrowing under with a knife-handle or forceps. Connect with Penrose drains. Doctor Day has aptly termed this a "slasheotomy."

3. Above is for anterior extravasation. Some surgeons bisect the scrotum in addition. Personally it seems unnecessary, and I call your attention to the presented cases, with a mortality of 66 per cent when this is done, alone without other incisional drainage.

4. For posterior extravasation cystotomy and a dissection of the bladder from its bed if necessary, so that drains may be placed to bottom of pelvic cavity. Sometimes a drain connecting perivesical space, with the perineum to the outside by way of the ischiorectal fossae, may be of advantage.

5. Any attempt at dilating a stricture, repair, bladder-neck surgery, or even removal of impacted calculi, is foolhardy and unwarranted where any degree of infection exists. Very recent cases of trauma without infection may be occasional exceptions. In the cases I will cite, added operations were done ten times, with eight deaths.

6. External urethrotomy, on account of the difficulty of locating the urethra and the fact that one is working in an infected field, is mentioned only to be condemned.

7. When the patients reach the wards, one must be alert to keep drainage established.

8. When the patient has recovered from the shock of operation, continuous hot baths (temperature 99 degrees) of permanganate 1 to 10,000 is a benefit. We have kept patients in this bath for four consecutive days without danger. Thiersch solution also can be used in the bath. A heavy coating of vaselin over entire body keeps the skin from contracting and makes for comfort.

9. If exhaustion or other conditions force the patient to bed, hot moist permanganate or Thiersch solution dressings, kept sopping-wet and hot, are of benefit.

10. Forced fluids by mouth, vein, rectum, etc., and attention to the necessary heart therapeusis, is always in order.

11. Hot sitz baths, when ambulatory, stimulates healing, as does ultra-violet light therapy.

I now present for your consideration an analysis of one hundred cases, with the following data:

TABLE 1.—*Mortality: By Age Periods*

Age: Years	No. Cases	Died	Mortality Per Cent
10 and under	2	0	0
10 to 20	3	0	0
20 to 30	8	2	25
30 to 40	13	3	23
40 to 60	31	16	51
60 to 80	42	27	64
80 or over	1	1	100
Total	100	49	49

TABLE 2.—*Duration from History and Findings*

Days	No. Cases	Died	Mortality Per Cent
1	22	3	14
2	25	8	32
3	20	13	65
4	10	6	60
5	8	5	62.5
6	4	3	75
7	4	4	100
8 to 10	6	6	100
10 or over	1	1	100
Total	100	49	49

TABLE 3.—*Type of Operation*

	No. Cases	Died	Mortality Per Cent
Catheter drainage	1	1	100
Incision and drainage	8	6	75
Internal urethrotomy drainage	1	1	100
External urethrotomy drainage	6	3	50
Cystotomy incision drainage	74	28	37.5
Not operated	10	10	100
Total	100	49	......
Bisection scrotum included	21	14	66

TABLE 4.—*End-Results*

Time of Deaths in Postoperative Days	Not Operated 10	Recovered: (Average Stay in Hospital)
On table 1	All died within forty-eight hours	Forty-one days Some remained for other surgery
1 6		
2 to 5 14		
6 to 10 13		
10 or over 5		

TABLE 5.—*Causes of Disease and Location of Extravasation*

	Anterior	Posterior
Carcinoma prostate	5	2
Infection	8	0
Instrumentation	8	0
Fistula	3	0
Stone	2	2
Resection	1	1
Ruptured bladder	0	5
Ruptured urethra trauma	2	2
Stricture	59	0
Total	88	12

SUMMARY

1. After the age of forty years the mortality rate is unbelievably high.
2. Duration of the disease is a very important factor in determining prognosis. The longer in effect the more virulent the infection, the less chance for recovery.
3. Cystotomy, with incision and drainage, seems to be the operation of choice and offers the lowest mortality rate.
4. Bisection of the scrotum seems in some way to detract from chance of recovery, and to add to the mortality rate unless accompanied by other incisional drainage.
5. Every patient with stricture should be taught to return for sounds; and if he does not do so of his own accord, if it were legally possible, a bench warrant should be issued to bring him in at intervals.
6. Every case of extravasation in a teaching hospital should be demonstrated to all internes in a group, so that they would have a better understanding of these cases, not only to diagnose and treat the same, but act to prevent them.
7. Cause of death in order named were septic toxemia, pyelonephritis, cardiac failure; and most all cases were accompanied by degeneration of kidneys, liver, and spleen.
8. Periurethral, scrotal, penile, abdominal, phlegmonous processes may occur without urinary extravasation, and may be entirely bacterial with exudate.

527 West Seventh Street.

DISCUSSION

GEORGE F. SCHENCK, M. D. (1930 Wilshire Boulevard, Los Angeles).—Urinary extravasation is too often overlooked, neglected, or its seriousness not appreciated; and for that reason unnecessary delays and inappropriate treatments are instituted. The condition always demands immediate and radical surgery. The surgery must accomplish, viz., (1) diversion of the stream of urine, and (2) adequate drainage of the involved tissues.

The operation should be done quickly and with the minimum amount of shock because of the patient's general septic and, in many instances, uremic condition. It is usually a poor policy to instrument the urethra at the time of the initial operation.

The advantage of a suprapubic cystotomy is that it simplifies subsequent dilatations of the urethra. However, I see no reason for the drainage to be superior to that obtained via a perineal cystotomy, and the operative shock is less with the latter. A perineal cystotomy is preferable in selected cases. It is the only way to control hemorrhage cases of traumatic rupture of the deep urethra.

Personally, I bisect the scrotum in all cases in which the scrotum is involved. The advantage is that it permits the connecting of all incisions made in the perineum, ischiorectal fossa, penis, groins and prevesical area. It minimizes the gangrenous sluff that is most prevalent within the scrotum. There is no reason for it to increase mortality. However, bisection of the scrotum is by no means a complete operation for urinary extravasation.

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A. A. KUTZMANN, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Negley's concise and comprehensive discussion on urinary extravasation is timely; timely because it falls only to such individuals who have the opportunity of working on a large county hospital urologic service to acquire the necessary experience to diagnose and properly treat this condition. It appears to be a condition more often found in the lower strata of our social order. Many urologists of extensive experience in private practice, seeing very little if any of this type of pathology, often treat urinary extravasation with insufficient boldness. I can only further emphasize the various important points in the paper. The necessity for an early accurate diagnosis is most important, since delay directly increases the mortality. Witness the figures in Table 2 where, from the third day on, the mortality ranges from 65 to 100 per cent. Even early diagnosis may still carry a 20 to 25 per cent mortality in the hands of able urological surgeons. A familiarity with the areas extravasated, as well as the pelvic fascias controlling the spread of such extravasations, will aid the surgeon in localizing the site of rupture. The extravasation, and not its underlying causes (such as urethral stricture, etc.), must then be treated at the moment. The draining of the bladder by cystotomy, and multiple wide incisions of all extravasated or suspiciously extravasated areas is paramount. The latter is most important, for it is here that the surgeon with insufficient experience is apt to be too conservative. If you have a patient with a wide extravasation, be bold and drain most extensively every part of even suspicious appearing areas. I have always made it a point that when I thought that the case had been sufficiently incised, to continue a bit more. It is better to overdrain (if such is possible in some of these cases) than to see your patient die of a progressive toxemia, or to later remove additional areas of necrotic tissue. Of course, cases of localized extravasation, occurring between the layers of the pelvic fascia and confining itself to the scrotum, need only have scrotal drainage; but all others must necessarily be more extensive if you would save your patient. Urinary extravasation cannot and must never be treated conservatively. As Doctor Negley has shown in Table 4, all such patients will die if not drained surgically.

Many of these patients, extravasated over a period of several days, will be brought in moribund and nothing can save them; others treated in a bold manner will make a dramatic recovery, and later advance to a point where the underlying cause of the extravasation may be corrected.

In conclusion, let me stress: (1) early correct diagnosis, (2) extensive and thorough incisional drainage of extravasated areas in conjunction with cystotomy, and (3) correction of the underlying cause of the extravasation in the latter or convalescent stages of your patient.

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H. C. Bumpus, Jr., M. D. (112 North Madison Avenue, Pasadena).—Intelligent treatment of urinary extravasation, following urethral stricture, demands a familiarity by the operator with the fascial planes of the perineum and genitals; for, as the authors have stated, these planes control the advancement of urine escaping from the urethra.

Interesting enough, the principal fascias involved still carry the names of their first describers. Buch's fascia is named for Gordon Buch of the New York Hospital who, in 1848, described the extension of the suspensory ligament of the penis which encloses the penile structures after it fuses with the triangular ligament, and so determines the course of urine escaping from the anterior urethra. Some thirty-seven years prior to Buch's observations, an Irish surgeon, Abraham Colles, had observed that rupture of the posterior urethra was followed by perineal swelling that spread to the scrotum and later to the pubis, while rupture of the deep urethra resulted in abscess formation that pointed in the ischiorectal fossa. He then described what has since been known as Colles's fascia, which, by its density and attachments, definitely limits the extravasation of urine.

The essayists rightly emphasize the importance of early and extensive interference if success is to be expected, and I can but stress the point that, in cases such as they describe, a period of observation has no place. I think it should also be emphasized that stricture in itself is seldom the cause of urinary extravasation. It must be complicated, as in the typical case they refer to, by trauma or infection before extravasation will occur. In fact, it seems very doubtful if true extravasation of urine ever occurs except following trauma. The so-called urinary extravasation associated with stricture is much better termed peri-urethral gangrene, and by thus emphasizing its infectious etiology the hazards incident to neglect of strictures of the urethra are made more apparent.

SARCOID*

By Frederick G. Novy, Jr., M.D.
Oakland

Discussion *by Kendal Frost, M.D., Los Angeles; Nelson S. Keeler, M.D., Oakland; Stuart C. Way, M.D., San Francisco.*

THE recent observation of a patient with sarcoid having an unusual nasal involvement has prompted this short review of the subject and the report of the case. Sarcoids are best considered along with other unusual forms of tuberculosis. While there is by no means complete accord among dermatologists as to the classification of cutaneous tuberculosis, there are in the main three groups:

RELATION OF SARCOID TO OTHER FORMS OF TUBERCULOSIS

1. *True Tuberculosis of the Skin.*—In this group there are two subdivisions: The first is the exogenous type, a direct implantation of the tubercle bacillus into the skin, as exemplified by the anatomical tubercle or tuberculosis verrucosa cutis. The second is the endogenous type, in which the infection is carried to the skin by the blood stream, or direct extension from some deeper tuberculous process, as bone, lymph gland, or excretions from the lungs or gastro-intestinal tract. Examples of this group are: lupus vulgaris, scrofuloderma, and tuberculosis cutis orificialis.

2. *Tuberculids.*—These, because of the association with tuberculosis elsewhere in the body, and their histology, are considered to be due to toxic products of the infection. The most important in this group are lichen scrofulosorum, papulonecrotic tuberculids, and erythema induratum of Bazin.

3. *Sarcoids.*—This includes multiple benign sarcoid (lupoid) of Boeck, sarcoid of Darier-Roussy, lupus pernio, and others which questionably belong here.

RECENT LITERATURE ON SARCOIDS

In recent years the subject of sarcoids has been extensively reviewed by many authors, and the interested reader is referred to such excellent articles as those of Goeckerman,[1] Sulzberger,[2] Nomland,[3] and the recent symposium in France on sarcoids.[4]

DARIER'S FOUR GROUP CLASSIFICATION

Since the first description of this group by Boeck,[5] other conditions have been included. Some of these have stood the test of time, while others have been added only to be again placed elsewhere. The Darier classification, which included four types, has been standard for a long time, and is still used in some texts. These four types were: (1) Multiple benign sarcoid (Boeck); (2) subcutaneous sarcoid (Darier-Roussy); (3) sarcoid nodularis of the extremities; and (4) sarcoid of Spiegler-Fendt.

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* From the Division of Dermatology, Alameda County Clinic, Oakland, California.

Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

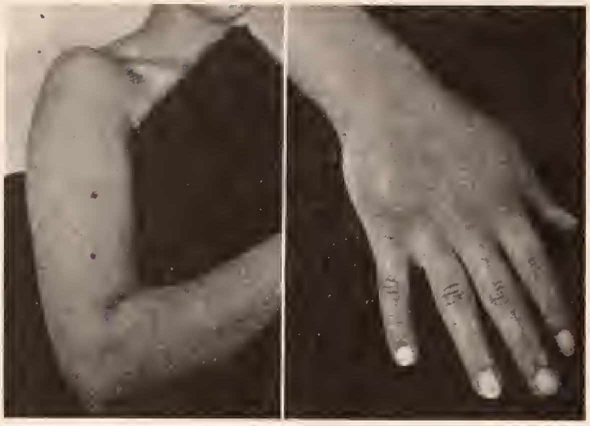

Fig. 1 Fig. 2

Fig. 1.—Superficial sarcoids on the right arm.

Fig. 2.—Sarcoid tumor between the fourth and fifth metacarpals of the right hand.

In a recent communication, Darier[6] no longer includes these last two types. Sarcoid nodularis of the extremities is now thought to be only a form of erythema induratum of Bazin, and so should be placed with it in the group of tuberculids.

OTHER TYPES

Sarcoid of Spiegler-Fendt is a rare neoplastic condition of low malignancy belonging to the group of lymphoblastomas, as has been shown by Sweitzer[7] and Lewis.[8] Clinically, however, there is a close resemblance. The term sarcoid for this condition, because of the confusion, should be discarded, and its other term, sarcomatosis cutis, should be employed.

The difference between the first two types—that of Boeck, and the subcutaneous variety of Darier-Roussy—is really only one of depth of the involvement of the skin. In the latter type, the nodules occur only in the corium or subcutis. Cases showing both types are frequently met with.

Lupus pernio, a condition involving the exposed parts, as the fingers, ears, nose, and feet, with deep colored infiltrations and nodules, should be included, from its clinical and histological picture, in the group of sarcoids. This was the recent general consensus of opinion of European observers.

Nodular tuberculosis of the hypoderm of Wende is another condition, as suggested by Goeckerman,[1] which should not be a separate clinical entity, as it also has the characteristics of sarcoids.

SARCOIDS MAY BE DESCRIBED UNDER ONE HEADING

In brief, then, we may describe sarcoids under one heading. The eruption is made up of scattered papules, nodules, and occasionally plaques involving, for the most part, the face and extremities. These are firm and painless, and when involving the epidermis have a purplish-red color. On diascopic pressure many of the papules have a yellow hue, the so-called, "apple-jelly nodule." The deeper lesions have a tendency to follow the lymphatics and blood vessels. They do not ulcerate or break down. This is an important feature in that other forms of tuberculosis have a tendency to do so. The eruption may appear suddenly, hundreds of lesions appearing in a short period of time, or there may be a gradual evolution, a few nodules developing at a time over a course of years. On healing, either spontaneously or under treatment, there is some atrophic scarring.

Sarcoid is not merely a cutaneous disease, but similar nodules and tumors have been found in nearly every organ in the body. This fact is being recognized more and more, so that now nearly every case reported shows that more than one tissue has become involved. The most frequent of these are the lungs, bones, and mucous membranes.

In the lungs there are rather definite discrete nodules, which usually involve the middle or lower lobes and are around the large bronchi. The x-ray findings are confusing with tuberculosis. The physical findings in the lungs are ordinarily negative. In large series of cases reported recently, as for example, those of Frost,[9] Goeckerman,[1] and Nomland,[3], the percentage of positive lung findings is fairly high.

In the bones, which are also a site of frequent involvement, there are found rather marked changes. In many there is actual punched-out bony destruction and cystic changes. This is seen most frequently in the bones of the hands and feet. Doub and Menagh[10] have reviewed this phase of the subject from the roentgenological viewpoint. This condition has been called osteitis tuberculosa multiplex cystica.

Involvement of the mucous surfaces, such as the eye, tonsils, and larynx have been reported. The nasal mucosa, however, is the most common site. Allison and Mikell[11] reported a case in which there were marked destruction and perforation of the septum, and a tumor mass involving the entire epiglottis. Lomholt[12] states that nearly 60 per cent of the cases seen in Denmark show mucous membrane lesions. He describes three stages in the evolution of the process in the nose. First, there are discrete grayish nodules with an erythematous halo, situated usually on the inferior turbinate. This is similar to the condition seen in the case to be reported, and has not been particularly noted in cases described in this country. The second stage is that of a catarrhal condition with heavy crusts and erosions. The final stage is secondary obstructive hypertrophy of the turbinates and fibrosis.

Enlargement of groups of lymph nodes, particularly those draining areas in which there are cutaneous manifestations, has been noted. Of the internal organs in which sarcoids have been found are the pericardium, kidneys, spleen, liver, and central nervous system.[13]

REACTION TO THE TUBERCULIN TEST

Another finding of interest in these cases is that nearly all of them have a negative tuberculin test. Sulzberger[2] believes this to be due to a condition of anergy in the patient, and is a differential point between this condition and tuberculids which are hyperergic to tuberculin. Martenstein and Jadassohn[14] have shown that serum of

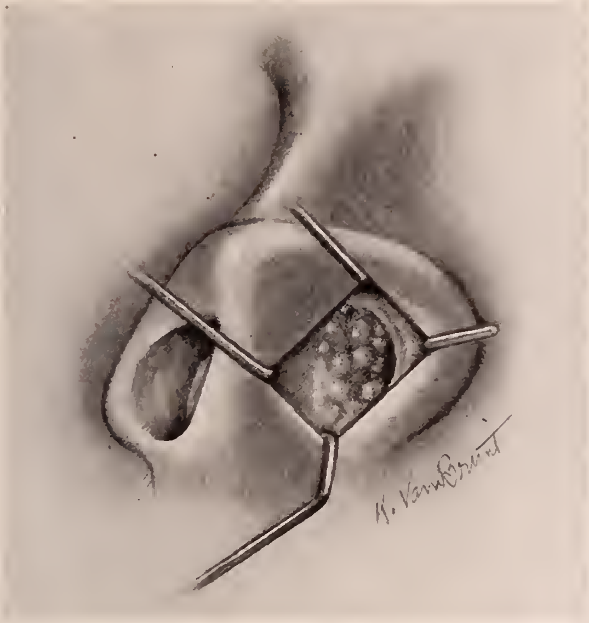

Fig. 3.—Early sarcoid involvement of the nose.

patients with sarcoid, mixed with tuberculin in vitro, gives a negative reaction in susceptible persons. In other words, the serum contains the so-called anticutins which will neutralize the tuberculin, and does not rule out tuberculosis as the etiologic factor.

MICROSCOPIC PATHOLOGY

The microscopic pathology in well developed nodules of sarcoid is characteristic. In early lesions this is not true, in that there is a nonspecific cellular infiltration, mostly of lymphocytes and a few epithelioid cells, about dilated blood vessels. In the well-developed nodule one sees sharply circumscribed tubercles, which are separated from one another by definite connective tissue septa. The tubercles themselves are composed nearly entirely of epithelioid cells, with a slight infiltrate of lymphocytes at the periphery of the nodule. They seem to arise from perivascular tissue. Giant cells are occasionally seen. There is never any evidence of necrosis or caseation, which is a differential point between this and true tuberculosis. In the skin these nodules can be seen in any part of the corium, usually in the deeper portions. Changes in the epidermis are secondary.

ETIOLOGY

The etiology of sarcoid is by no means settled, but today it is thought by most authors to be tuberculous in nature, due to an attenuated or bovine strain of the bacillus. This is substantiated by the many observations of tuberculosis elsewhere in the body at autopsy. Klauder[15] reported such a case. It has been difficult to demonstrate the organism in material from the nodules, and usually animal inoculations have been negative. However, in very early lesions, the bacilli have been found, as in the classical case of Kyrle and that of Wende,[16] if we accept his case as one of sarcoid. In a few instances, inoculated animals, in this very early period, have also been positive for tuberculosis.

There are, however, many who think that the sarcoid reaction is not typical for any specific disease, but can be caused by several other different infections, as syphilis, leprosy, and even foreign bodies if the tissue reaction of the individual is such as to produce this type of response. Darier[6] recently felt this way as to the etiology.

A third group feel that sarcoid is a disease by itself, as it is a generalized reaction involving not only the skin, but usually other organs at the same time. The negative tuberculin reaction is to them against a tuberculous etiology, as well as the nearly negative results of finding the bacillus of tuberculosis, either directly or by animal inoculation. Another point brought out is the peculiar bone and lung findings. These, however, could well be on a tubercular basis.

At present, the bulk of positive evidence is that sarcoids are a manifestation of tuberculosis.

REPORT OF CASE

Case 1.—W. M., a colored school girl, age seventeen, was first seen at the Oakland Health Center, May 22, 1934, complaining of frequent nosebleeds and an eruption on the arm of several months' duration.

In December, 1933, the patient had a "bad cold," and at this time she had an infected finger which took some time to heal. The cold persisted, and with it she began to have nosebleeds and some discharge which formed heavy crusts. These symptoms became more and more noticeable, so that obstruction of the nose developed at times and she would have trouble breathing. This continued until the time of her first visit.

In February, 1934, she had an infected area on the right leg which cleared up in about three weeks, with a slight scar. About the same time two small nodules appeared, one on the right arm, and the other on the chin. For some time these gradually grew larger, and then remained stationary. There was no pain associated with their development, but they were somewhat tender to touch. After some weeks of evolution the involved skin took on a purplish color, and later there was some slight scaling. This was in March, 1934. Since that time there has been no change in their appearance. Other new lesions have developed recently. Several on the back of a similar nature, and others which she could feel, but which showed no change in the overlying skin.

In May, 1934, a painless swelling developed in the right hand which gradually increased in size. At first there was no interference in motion, but of late there has been some.

Along with the above conditions she has had some general malaise. From April to July there has been a loss of ten pounds in weight. Recently there have been frontal headaches, which have increased in frequency and severity. After eating she has felt distended, and occasionally there has been vomiting.

The past and family history were negative. There have been no known contacts with tuberculosis.

Examination. — The patient was first seen in the otology service, and at this time she presented hypertrophy of the septum and turbinates, with a purulent discharge. This condition did not change.

On July 13, 1934, she was seen in the dermatologic clinic and presented about twenty scattered nodules over the face, extremities, and trunk. These varied in size from about one centimeter to three centimeters in diameter. They were all firm and nonlobulated, and not tender to palpation. Most of them did not involve the epidermis, nor did they appear to be attached to it. On the outer aspect of the left arm were two tumors, one above the other, which had the same consistency, but they definitely involved the overlying epidermis. The skin had a deep purplish hue and in the center part of these there was some crusting which, on removal, showed a serous discharge, but no ulceration. On diascopic pressure there was a suggestion of a yellowish nodule, but this was not definite. The chin and back presented similar lesions. All of the others, as stated above, were subcutaneous.

The right hand presented a tumor mass between the fourth and fifth metacarpals. This was irregular, slightly movable, and of a nearly bony consistency, and appeared to be attached to the bone. Biopsy from this mass was taken several months later by Dr. L. Barnard, who found the tumor to be attached to the tendon, and not to involve the bone.

The mucous membrane of the nose presented marked crusting which, on removal, showed considerable erythema. Scattered over the septum, lateral wall, and floor of the nose, there were numerous pearly discrete tumors resembling small buds of granulation tissue. They were about the size of a glass-headed pin. The rest of the pharyngeal mucous membrane was normal. Bronchoscopic examination showed no evidence of lesions in the bronchial tree. Two of these tumors were removed by Doctor Keeler, one for histologic study, and the other for guinea-pig inoculation. General examination did not reveal any other pathology.

The routine laboratory tests of the urine and blood were negative, except that there was a slight secondary anemia. The sputum did not show any acid-fast organisms. The culture from the nose did not have any unusual organisms.

The guinea-pig, inoculated with one of the tumors from the nose, was killed and autopsied at the end of two months. No evidence of tuberculosis was found. This finding is frequently met with in cases of sarcoid. Only very early lesions have showed positive inoculations.

Intracutaneous injections of old tuberculin were negative with 0.1 milligram and 1.0 milligram.

X-ray findings of the hands and feet did not show changes so commonly seen in this condition. This was a little surprising, in that the patient had this hard swelling in the right hand. An x-ray of the lungs showed only slight bronchial thickening, and none of the nodules which have been noted in some of these cases.

Biopsies. — A biopsy was taken from one of the papules on the arm and examined in the dermatology department of the University of California. The epidermis showed elongation of the rete pegs, and in the basal layers there was some intercellular edema. The granular layer and outer layers were normal. Throughout the corium there was some edema. This was particularly noted in the papillary bodies. There was a slight cellular infiltration, which was made up mostly of lymphocytes which tended to be perivascular. Deep in the corium there were several well-formed tubercles. The largest of these extended down nearly to the fatty layer. They were made up of a dense collection of epithelioid cells and fibroblasts. At the periphery of the tubercle there were a few lymphocytes. No giant cells were noticed. There was no evidence of central necrosis.

In the upper corium, divided by connective tissue septa, were several small early tubercles similar to the larger deeper ones. The cytoplasm of some of the epithelioid cells was stained poorly, and there was a tendency for vascuolization.

The biopsy from the nose had a transitional type of epithelium, but a few goblet-cells were seen. Throughout the section there were several large granulomas which were discrete, and extended as deep as the section of the skin. At the margin the fibroblasts were greater in number and seemed to form nearly a limiting membrane. No giant cells and no necrosis were noticed. A number of the tubercles were rather vascular, and large blood vessels could be noted in the central part. There was an infiltrate of lymphocytes which was confined almost entirely to the periphery, but when blood vessels were present they would tend to follow them into the central part of the tubercle. In the dense tubercles this vascularization was not noted. Throughout the section there was some lymphocytic infiltration about the mucous glands.

The section taken from the tumor of the hand presented the same pathology as the other two biopsies. There was no evidence of bony involvement.

The histopathologic diagnosis was that of sarcoid.

The patient has recently completed a course of six injections of neoarsphenamin with no change in the lesions except the tumor on the hand, which has become larger.

COMMENT

The laboratory findings in the case herein reported are similar to those found in most cases of sarcoid, namely, a negative reaction to tuberculin and no evidence of tuberculosis in a guinea-pig inoculated with one of the tumors.

The lungs and bones, frequent sites of infection, were free of evidence of the disease. This is somewhat surprising in the case of the bones of the right hand, as the tendon sheath between the fourth and fifth metacarpals was markedly involved.

The unusual features of this case were that the patient presented nodules of the skin, both of the superficial and deep types, and similar lesions in the nose. While nasal involvement is by no means rare, the type seen in this case, of small discrete pearly nodules, is apparently unusual in this country.

411 Thirtieth Street.

REFERENCES

1. Goeckerman, W. H.: Sarcoids and Related Lesions, Arch. Dermat. and Syph., 18:237-262 (Aug.), 1928.

2. Sulzberger, M. B.: Sarcoid of Boeck (Benign Miliary Lupoid) and Tuberculin Anergy, Amer. Review of Tuberculosis, 28:734-745 (Dec.), 1933.

3. Nomland, R.: Hematogenous Cutaneous Tuberculosis (Sarcoid) in Negroes, Arch. Dermat. and Syph., 30:59-75 (July), 1934.

4. Bull. de la Soc. Fran. de Dermat. et Syph., 995-1392 (May), 1934.

5. Boeck, C.: Multiple Benign Sarkoid of the Skin, J. Cutan. Dis., 17:543, 1899.

6. Darier, M. J.: Considérations sur la nature des Sarcoides, Bull. de la Soc. Fran. de Dermat. et Syph., 999-1002 (May), 1934.

7. Sweitzer, S. E.: Sarcomatosis Cutis of Spiegler, Arch. Dermat. and Syph., 11:481 (April), 1925.

8. Lewis, G. M.: Is Spiegler-Fendt Sarcoid a Clinical or Histologic Entity? Arch. Dermat. and Syph., 31:67 (Jan.), 1935.

9. Frost, K. P.: Sarcoid of Boeck, Arch. Dermat. and Syph., 13:389, 1926.

10. Doub, H. P., and Menagh, F. R.: Bone Lesions in Sarcoid—A Roentgen and Clinical Study, Am. J. of Roent. and Rad. Therapy, 21:149 (Feb.), 1929.

11. Allison and Mikell: Sarcoid Associated with Tuberculosis of the Larynx, Arch. Dermat. and Syph., 25:334 (Feb.), 1932.

12. Lomholt, S.: Sur des Lesions Muqueuses dans les Sarcoides, Bull. de la Soc. Fran. de Dermat. et de Syph., 1142 (May), 1934.

13. Bernstein, M., Konzleman, F. W., and Sidlick, D. M.: Boeck's Sarcoid, Arch. Int. Med., 44:721 (Nov.), 1929.

14. Jadassohn, W.: L'origine tuberculeuse de la Maladie de Boeck, Soc. Fran. de Dermat. et de Syph., 1344 (May), 1934.

15. Klauder, J. V.: Multiple Sarcoid-Like Granulomas of the Skin, Arch. Dermat. and Syph., 12:171 (Aug.), 1925. Klauder, J. V., and Weidman, F.: Multi-

ple Sarcoid-Like Granulomas of the Skin: Supplementary Note, Arch. Dermat. and Syph., 13:675 (May), 1926.

16. Wende, G. W.: Nodular Tuberculosis of the Hypoderm, J. Cutan. Dis., 29:1, 1911.

DISCUSSION

Kendal Frost, M. D. (1930 Wilshire Boulevard, Los Angeles).—The group of conditions to which we give the name of sarcoid has interested me for a number of years. Doctor Novy's presentation of the tuberculous aspect of the condition is so adequate that it needs no further elucidation. There is a school in Denmark, particularly, which believes that sarcoid (both Boeck and Darier-Roussy types) is due to a bacillus closely allied to the tubercle bacillus, and also resembling in some ways the bacillus of leprosy. Kissmeyer has written an excellent monograph on the subject of sarcoids in which this idea is developed. He draws a distinct line between the tuberculids, including lupus pernio and the sarcoids which, according to their thesis, are a separate entity produced by a specific microörganism, responsible for the skin lesions as well as the bone and pulmonary and other visceral findings. Denmark is one of the localities in which there is relatively high incidence of the disease. In North America the disease is among the rarities. It seems reasonable to not entirely disregard this opinion coming from a locality in which a rich material is available.

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Nelson S. Keeler, M. D. (411 Thirtieth Street, Oakland).—From the standpoint of the rhinologist, sarcoid changes in the nasal mucosa appear to be an extremely rare finding. This is the first case which has come under my observation, and numerous inquiries among others in the same field have failed to reveal any other experience with it.

The most striking characteristic of the lesions in this case has been their tendency to persist without any change. Examination of the nose now presents the same picture as the original drawing, made eight months ago, the tumors retaining their discrete, pearly appearance, and remaining the same size.

A differential diagnosis should include tuberculosis, glanders, leprosy, and syphilis. The former three may be seen in their earlier stages as granulation nodules, in which, of course, may be found the causative bacteria.

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Stuart C. Way, M. D. (490 Post Street, San Francisco).—Doctor Novy, in a commendable manner, has briefly summarized our present knowledge on the subject of sarcoid. This disease, common on the European continent, is somewhat of a rarity in California.

With due respect to the recent and accepted changes made in its classification, differences of opinion persist because of the disputed etiology.

While many observers are in accord that sarcoid is a tuberculous manifestation, it seems reasonable to assume that its pathology, as is the case in other diseases, is capable of being produced by more than one bacterial toxin.

Sutton's statement that arsenic appears to be a specific in the Boeck and Spiegler-Fendt type of sarcoid speaks in behalf of its nontuberculous nature.

Although the Spiegler-Fendt type is no longer classified among the sarcoids, it is probable, as Fox and Wile have indicated, that many cases of sarcoma of the skin supposed to have been cured by arsenic really belong to the sarcoid group.

E. Hoffmann, in 1925, discussed an unusual case resembling lupus pernio, and the x-ray plates shown clearly demonstrated the presence of cystic degenerative changes in the long bones of the hand. Since that date, numerous cases of lupus and sarcoid have been personally examined for osteitis tuberculosa multiplex cystica, with negative findings. Therefore, the conclusions reached were that it is a rare complication, and not common, as Doctor Novy believes.

THE LIVER AND CARBOHYDRATE METABOLISM[*]

By Douglas R. Drury, M.D.
Los Angeles

Discussion *by Alvin G. Foord, M. D., Pasadena; Fred H. Kruse, M. D., San Francisco.*

In the limited space of a short article, one can treat adequately only one or two sections of the large field embraced by this subject. The liver is the real center of carbohydrate metabolism, by virtue of its control of the blood sugar level. This "duty" alone embraces many important processes. We must consider, besides, the bearing of these processes on the other activities of the liver, and it is with some of these relationships that I shall deal here; in other words, how is the liver affected by its activities in carbohydrate metabolism?

SUGAR AND FAT METABOLISMS OF THE LIVER

The relationship of the sugar and fat metabolisms of the liver is an interesting one. When the liver is storing glycogen, the fat content diminishes, as a rule, and vice versa. This reciprocal activity has been called the fat-glycogen antagonism of the liver. There are many circumstances under which fat will accumulate in this organ.

During fasting the liver becomes fatty, and this is very readily counteracted by sugar administration. In diabetes the liver fat tends to increase and this is prevented by increasing carbohydrate metabolism, often, of course, with the aid of insulin. When fat alone is fed to an animal the liver lipoid increases; but if carbohydrates are ingested at the same time the liver does not retain the fat which must be deposited elsewhere. Table 1, taken from the work of Rosenfeld, clearly illustrates this. It shows the results of feeding sesame oil to two groups of dogs. The first group received 30 grams of oil per kilo for four days; the second group received, besides the same dose of oil, 8 grams sugar per kilo.

Table 1.—*Showing Results of Feeding Sesame Oil to Two Groups of Dogs*

Dog Group	Liver Fat in Per Cent	Average
No. 1	27.1, 36.2, 26.8, 24.7	28.7
No. 2	15.5, 13.9, 6.8, 12.9	12.3

It is quite apparent that the added sugar prevents the deposition of fat in the second group of animals.

This antagonism can be demonstrated in still another way. If the amount of liver tissue in an animal be greatly reduced by excision of a large part of the organ, the remaining fragment will become markedly infiltrated with fat. Two-thirds of the liver of the white rat can be removed, with recovery of the animal. If an ordinary diet of

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[*] Read before the General Medicine, General Surgery, Pathology and Bacteriology, and Obstetrics and Gynecology sections of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13–16, 1935.

Table 2.—*Fat Influx Results When Glucose Is Injected*

	Fat in Excised Liver. Per Cent.	Fat in Surviving Liver after 24 hours. Per Cent.
Group 1 Controls	4.4	18.6
	4.4	15.2
	4.6	20.4
	4.4	18.5
	5.4	17.4
Group 2 Injected with 5 per cent glucose, 3 cc. every 2 hours	3.8	3.7
	4.9	4.4
	4.8	3.9
	4.5	4.2
	5.1	4.6

Table 3.—*Results on Animals When Given a Rich Cream Diet*

Per Cent Fat in Liver at Operation	Survival Time in Hours
29.8	8
29.4	12
30.7	13
29.7	18
21.4	Lived
19.1	Lived
18.1	Lived
15.3	Lived
22.2	Lived
23.8	Lived
21.1	Lived

bread and milk be given these animals, we find the fat content of the surviving lobes of the liver greatly increased after one day, and it remains high for four to six days. If glucose be administered to the animals by adequate repeated injections, the fat influx can be prevented. Table 2 illustrates this action.

This shows how reduction of the amount of liver tissue results in a marked influx of fat in the remaining part, and how this may be prevented by the injection of proper amounts of glucose. These results are of practical interest, because, although we do not remove large amounts of the liver in patients, there are many diseased conditions and toxic agents which cause a marked reduction in functioning liver tissue, and we might well assume this tendency for fatty infiltration will obtain here, as in experimental animals, and also, that it may be combated with adequate carbohydrate administration.

These instances indicate the effectiveness of sugar in controlling fat deposition by the liver. It might be well to indicate next the practical significance of this action.

SUSCEPTIBILITY OF THE LIVER TO TOXIC AGENTS

It is now a well established fact that an increased concentration of fat in the liver greatly intensifies the susceptibility of this organ to toxic agents. The early work of Rosenfeld, of Whipple, and of Graham first established this fact, and many experimenters since have confirmed it. Agents that will cause necrosis of the liver cells, which contain fat, fail to do so if the fat has been kept out by previous carbohydrate administration.

A similar action is illustrated in Table 3. This shows the results of an experiment on a group of rats that had been given a rich cream diet prior to removal of two-thirds of the liver. Ordinarily this operation has a zero mortality—that is, for animals that have been fed previously on a bread-and-milk diet. In this case four out of eleven animals, or 36 per cent, died during the first twenty-four hours after operation. It is of interest to note that the four that died were those having the highest concentrations of fat in the liver at the time of operation.

One of the most noteworthy characteristics of the liver cell is its remarkable capacity for regeneration. Large portions of the liver substance may be eliminated by experimental surgery, or by toxic agents with complete functional recovery in a few weeks. Patients who have survived a severe acute yellow atrophy, and have been examined later, have shown liver tissue normal in amount and quality. This characteristic of the liver can be quantitatively studied in the white rat. Two-thirds of the liver is removed surgically in a large number of these animals, and the rate at which the remaining tissue grows back can be followed by sacrificing groups of them after varying periods of recovery, and determining the number of liver cells in the surviving organ. The number of cells in a liver may be quite accurately estimated by counting the cuboidal-cell nuclei in small samples of unit volume, and multiplying this number by the volume of the entire liver. The liver of the 150-gram white rat contains about 600 million so-called cuboidal cells. Chart 1 illustrates the rate at which the number of cells of the remnant is reëstablished after removal of two-thirds of the organ. This chart illustrates the advantages of determining cell number rather than liver mass. The broken line indicates the weight of the surviving organ, the unbroken line the number of cells, all expressed in terms of percentage of the normal or preoperative value. From the first to the fourth day the weight of the organ is unduly high because of the influx of fat and other substances, which do not represent functioning tissue but may be actually obstructive and harmful. Be-

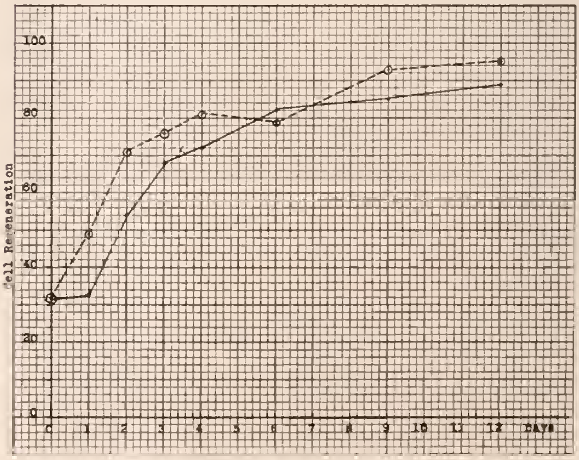

Chart 1.—Rate of reëstablishment of cells in liver remnant.

TABLE 4.—*Effects of a High Fat Diet on Regenerative Process*

Days of Regeneration	Diet	Weight	Cell Regeneration Per Cent
2	Control	71.4	55.2
2	Fat	54.0	37.1
3	Control	76.2	68.6
3	Fat	70.4	47.9
4	Control	81.5	72.0
4	Fat	96.7	51.0

TABLE 5.—*Showing Output of Ketone Bodies*

Day	Extra Exercise Taken Calories (Estimated)	Acetone Bodies Excretion Mgs.	Blood Ketone Bodies Mgs. Per Liter
1	1,500	4,970	......
2	N. A.	5,200	......
3	2,200	4,920	22.1
4	N. A.	4,980	......
5	500	3,500	......
6	1,000	7,230	......
7	750	8,390	......
8	In bed whole period	10,720	30.6
9	Very quiet day	7,350	......
10	1,000	4,990	21.4
11	N. A.	5,190	......

N. A.—Normal activity in laboratory.

tween the fourth and sixth days the weight actually diminishes due to the removal of fat. The number of cells, on the other hand, begins to augment at the second day and continues to increase steadily, though at a diminishing rate in a curve that is logarithmic in character. Table 4 illustrates the effect of a high fat diet on this regenerative process. It shows also the necessity of counting cells rather than taking the weight of the tissue. The weight figures give a false impression of growth, since much of this increased mass is due to the influx of fat. The cell count, on the other hand, shows a definite retardation in the regenerative process—a process that is of great importance to the body in recovering from disease involving the liver.

KETOSIS PRODUCTION BY THE LIVER

There is still another process of the liver in which fat and carbohydrate are involved: that is, in the production of ketosis. That ketone bodies can be produced by the liver was first shown by Embden in perfusion experiments. The work of Chaikoff and Soskin points to the liver as the main site, if not the sole site of the formation of these substances. Essentially, their findings were that acetone bodies disappeared quite promptly from the blood and tissues of the diabetic dog, when the liver was removed. The kidneys had been excised to prevent loss through them. Some recent work in our laboratory has lent support to their conclusions. A human subject was placed on a ketogenic diet, which was kept rigidly constant for three weeks. Thus with the caloric intake steady, the metabolism was varied from day to day by varying the amount of exercise carried out by the subject. From Table 5 we can see that the output of ketone bodies is not increased on the exercise days. The highest ketone excretion actually occurred on a day when the subject remained in bed for the entire twenty-four hours. The concentration of ketone bodies in the blood was a maximum on this day. The source of energy for the muscles during these exercise days must have been predominantly fat, since that was the character of the diet throughout. This increased metabolism of fat by the muscles does not increase the ketone body production. This fits in with the conclusion of Chaikoff and Soskin, that appearance of ketone bodies in excessive amounts in tissue fluids is due to increased rate of production by the liver. This activity of the liver is very definitely influenced by carbohydrate metabolism of the individual. Increased utilization of sugar by the subject leads very promptly to a diminished production of ketone bodies by the liver. Insulin may be an important intermediary agent in this process. Here again we have a very definite reason for the administration of carbohydrates, possibly in some cases with the addition of insulin, to cases that might be threatened with ketosis and its baneful results—acidosis and dehydration.

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DISCUSSION

ALVIN G. FOORD, M. D. (Pasadena Hospital, Pasadena).—Doctor Drury's interesting findings concerning the reciprocal deposition of fat and glycogen in the liver should be of considerable clinical importance. Several years ago, for instance, Le Count published reports of a series of patients having chronic alcoholism, who died suddenly with symptoms and laboratory findings of marked hypoglycemia, and in whom at postmortem the only important finding was a marked fatty infiltration of the liver. He believed that the disturbance in sugar metabolism was due to the profound filling of the liver cells with fat to such an extent that they were not able to convert glucose into glycogen and maintain the normal blood-sugar level. The view by some that the alcoholic tremor and the profuse sweating of advanced alcoholism are due to hypoglycemia is strengthened by Le Count's observations, and also by the present studies of Doctor Drury. Thorough blood chemical studies should be made on this group of patients in the light of known facts, and also postmortem studies of the liver to determine the rôle played by fat in the liver of these patients.

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FRED H. KRUSE, M.D. (384 Post Street, San Francisco).—Clinicians have realized for many years the importance of the liver as a storehouse for glycogen which, in turn, maintains the proper blood-sugar levels. They have also known that the glycogen store is depleted in obstructive jaundice and other disorders of the liver and, in the last several years, the feeding of sugars and other carbohydrates, and the intravenous administration of glucose have become a recognized procedure preliminary to all biliary-tract surgery and the chief therapeutic aid in the treatment of the cirrhoses and degenerative changes in the hepatic parenchyma. It has also been generally recognized that in obstructive jaundice especially, and presumably in the more diffuse changes of toxic and degenerative hepatitis, the protein metabolism of the liver has become deficient, so that a low protein intake must be assured to prevent ascites and edema.

As demonstrated so clearly in the experiments of Doctor Drury, the relationship of the sugar and fat metabolism of the liver, and that injurious fat accumulations develop as the glycogen content lessens, has not been widely known. The appreciation of this reciprocal activity, the fat-glycogen antagonism, is evidently of the utmost importance for practical therapeutic purposes, not only in the treatment of diabetes, ketogenic and acidosis states, acute diarrheic and depleting gastro-intestinal upsets, but also in the essential liver disorders mentioned above.

Heretofore, in biliary diseases associated with jaundice, the clinician has usually prescribed a fat-free diet because the absence of bile in the duodenum has prevented the proper emulsification or saponification of fats with consequent intestinal derangements.

Apparently much is yet to be learned of the lipoid metabolism of the liver. In obstructive jaundice there is usually hypercholesteremia, which roughly parallels the degree of obstruction and bilirubinemia. In cases of degenerative diseases of the liver, the greater the damage to the liver the greater the hypocholesteremia which accompanies the hyperbilirubinemia.

It is also known that marked thyrotoxicosis produces extensive hepatic necrosis, and it also produces hepatic glycopenia. As already stated by Doctor Drury, livers with low glycogen content have an increased susceptibility to injury, and they also accumulate fat.

It would appear, therefore, that the amount of fat ingestion by the alimentary canal, if it can be adequately handled by the gastro-intestinal tract, is not of such primary importance in the effect on the liver if there is an adequate carbohydrate intake which insures repletion of the liver glycogen.

The same accumulation of fat in the liver may take place by robbing the tissue stores even on a fat-free diet, due to the general metabolic disturbance, unless prevented by the provision of more liver glycogen.

It may be pertinent to mention here, also, that conditions which produce anoxemia—such as congestive heart failure, pulmonary infarcts, severe anemia, pulmonary consolidation (lobar pneumonia), and other conditions—produce liver damage by lowering the glycogen stores and increasing the fat accumulations, and require increased carbohydrate therapy.

CAUDAL AND TRANSSACRAL ANESTHESIA*

By Clark M. Johnson, M.D.
San Francisco

Discussion *by Frank Hinman, M.D., San Francisco; A. M. Meads, M.D., Oakland; Charles F. McCuskey, M.D., Los Angeles.*

THE purpose of this discussion is to remind anesthetists and surgeons of some of the advantages of regional anesthesia in general by restating our experience with one type, namely, caudal and transsacral block. Any of the desired spinal nerves may be reached by paravertebral, cervical, dorsal, lumbar, or transsacral and caudal injections. Although the latter is the only type with which I have had experience, the indications and advantages are comparable in all types of regional anesthesia once the technique is mastered, and its limitations are understood by the surgeon. There are three reasons why regional anesthesia has been so little used on the Pacific Coast. First, most surgeons are satisfied with the great advances made in general anesthesia, and with the occasional use of spinal anesthesia. Second, few anesthetists have troubled themselves to master the rather simple technique, and hence it has not been available. Third, some anesthetists and surgeons are unaware of the advantages of regional anesthesia in certain cases. No surgeon of wide experience limits himself to the use of any one anesthetic. He realizes that the anesthetic must be fitted to the patient, not the patient to the anesthetic. The wider his experience and that of his anesthetist, the more varied will be his selection. Many surgeons have recognized the advantages of regional anesthesia in certain cases, and have given the injections themselves with excellent results. Others have started and then abandoned the method because it is a rather fussy and time-consuming procedure. Although we have persisted in giving our own transsacral and caudal blocks for ten years, we recognize that it is primarily the anesthetist's work. It requires the presence of an anesthetist during the operation to watch the patient, and to give additional anesthesia if required. For the method to be successful, it requires close coöperation with the surgeon who must understand the advantages as well as the limitations. The anesthetist must also know beforehand the type and extent of the operation which is to be performed.

REGIONAL ANESTHESIA

The perfect anesthetic for all patients and for all operations, and one which does not affect any of the vital processes, which can be used with equal impunity in the infant, the robust youth, the ancient and feeble arteriosclerotic person, the septic patient or the one in shock, has not yet been discovered. Until we have such an anesthetic available, I am convinced that regional anesthesia is definitely indicated in certain cases. This opinion is based upon the use of caudal and transsacral anesthesia for over nine hundred urologic procedures (Table 1) on the urologic service at the University of California.

CONFUSION IN TERMINOLOGY

Considerable confusion exists in the terminology. Caudal block (incorrectly called sacral) consists merely in inserting a needle through the sacral hiatus into the sacral canal, and there de-

Table 1.—*Caudal and Transsacral Anesthesia—Nine Hundred Cases*

Caudal Block Only		Caudal and Transsacral Block	
Operation	No. of Cases	Operation	No. of Cases
Transurethral resection	108	Perineal prostatectomy	328
Cystoscopic procedures[1] ..	408	....	.... .
Miscellaneous[2]..	60	... .	....
Total	576	. ...	328
Grand total 904			

1. Includes fulguration, litholapaxy, radium implantation, ureteral meatotomy, dilatation of urethral strictures.

2. Includes external urethrotomy, drainage of perineal abscess, catheterization in difficult cases.

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* Read before the Anesthesiology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13 to 16, 1935.

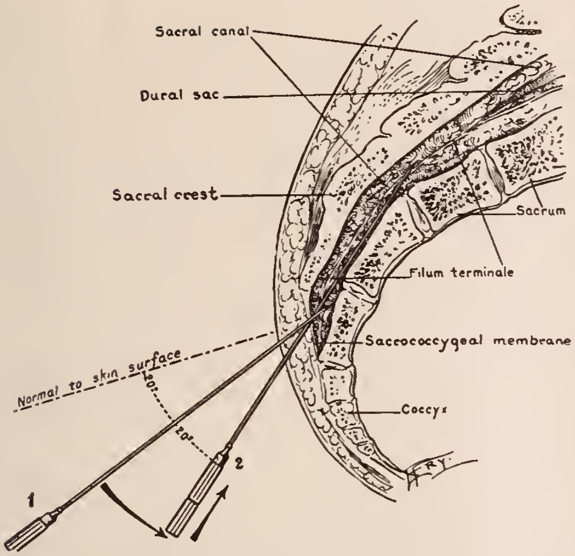

Fig. 1.—Shows the insertion of needle through the sacral hiatus and advanced into the sacral canal where 30 c.c. of procaine is deposited for caudal block. (After Labat, 1924.)

positing the anesthetic solution (Fig. 1). This reaches the third, fourth and fifth sacral nerves and the coccygeal plexus. Transsacral block is performed by inserting a needle through each of the sacral foramina on both sides and depositing the solution directly about the nerves (Fig. 2). When this is done it is usually accompanied by a caudal block, which insures prolonged and complete anesthesia of all five sacral nerves and the coccygeal plexus.

CAUDAL BLOCK

Caudal block alone is ideal for the following procedures: (1) Cystoscopic manipulations in badly inflamed (tuberculous especially) or contracted bladders, fulguration of tumors or ulcers of the bladder, crushing and removing stones. (2) Catheters or other instruments can often be passed after caudal anesthesia in difficult cases when such passage has been impossible before anesthesia. Many patients with acute retention have been spared a cystotomy in this manner. (3) Incisions in the male or female perineum are painlessly made, and hemorrhoidectomy can be performed. (4) Lastly—and most important at the present, especially from the urologist's standpoint—caudal block is ideal for transurethral resection. It has many advantages in this procedure. There is no straining, there is good relaxation, there is less troublesome bleeding, and the anesthesia lasts at least one hour, and usually an hour and a half. The electric spark may be used without fear of explosion. There is also this advantage: under caudal anesthesia, overdistention of the bladder is painful. This fact serves to prevent some of the accidents that occur under general anesthesia.

COMBINATION OF CAUDAL AND TRANSSACRAL BLOCK

A combination of caudal and transsacral block gives a more extensive anesthesia, permitting perineal prostatectomy, and extensive operations on the lower rectum, female perineum, vagina, and cervix.

Advantages. — Some of the advantages have been mentioned. I can best sum them all up by saying, first, that we have used this method in over nine hundred cases and have never had a death attributable in any way to the anesthetic, and second, that over three hundred of these injections were for perineal prostatectomies. Perhaps the last statement should be amplified. Where can you find a group of patients who are older, more feeble, more arteriosclerotic, who have poorer hearts and kidneys than a group of patients with prostatism? It has rarely been necessary to refuse to operate on any patient, clinic or private, regardless of cardiac or other complications, such confidence have we developed in this anesthesia for perineal prostatectomy. The reasons are obvious. There is little or no change in blood pressure, no nausea or vomiting, no inhibition of kidney function; there is good relaxation and prolonged anesthesia (from one and one-half to two hours usually) which permits of good exposure and plenty of time when necessary to secure perfect hemostasis. There is no postoperative headache or nausea, and patients can be given fluids freely by mouth. I am conscious of the fact that there are many who believe that a low spinal block is easier and gives equally good results. That it is easier, I agree. It has not been our experience that it is equally safe for all patients. For the patient who is an average or even fair risk, spinal block is perhaps as satisfactory as regional anesthesia, but not for the very aged and those who are poor risks, especially those with marked myocardial damage. Because it is so benign for such patients, we feel that it is advantageous for those who are in fair or even very good condition. We reserve spinal anesthesia for use in radical prostatectomy, for carcinoma, and for surgery on the bladder and lower ureters. These conclusions were reached after a fair trial of spinal anesthesia in over two hundred cases.

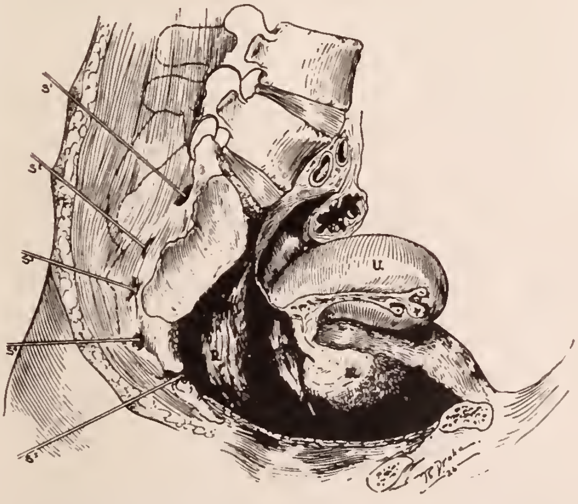

Fig. 2—Sagittal section of sacrum showing the location of the sacral foramina and the direction in which the needles are advanced to reach the sacral nerves in transsacral block. (After Labat, 1924.)

Disadvantages.—The so-called nervous patient who cannot be operated upon when awake exists chiefly in the minds of the patients and physicians themselves. The patient who has confidence enough in a surgeon to be operated upon, if properly approached, will allow him to select the anesthetic. This requires, however, the confidence of the surgeon and the anesthetist in the method. That it is sometimes a fussy, time-consuming method, is admitted. If, however, it is safer, this objection should not be considered.

Failures.—The possibility of failure to obtain anesthesia is a disadvantage. Failures are caused either by faulty technique, or poor coöperation and roughness, or a more extensive operation than was planned by the surgeon. In our first series of 270 cases, reported in 1929,[1] there were eight partial failures, three requiring other anesthesia, and one complete failure. Our percentage has been about the same since. In several instances, abnormalities or pathologic changes in the sacrum have made the injection impossible.

Reactions.—Though reactions from procain are not common, they do occur and, while they may be startling for a few moments, none has proved fatal. Most reactions can be prevented. The use of sodium luminal and caffein intravenously has proved the best restorative in our hands. In addition, the head should be lowered.

TECHNIQUE

It would be superfluous to attempt to give in detail the mechanical technique, as it was well described years ago. We have followed closely the technique of Gaston Labat,[2] with minor changes. Although any form of nerve block is relatively simple, it requires a definite understanding of the anatomy involved, especially the landmarks used to reach the desired nerves as well as the anesthesia that will result. With this knowledge and a few trial injections on a cadaver, using methylene blue so that subsequent dissection will show any errors, the technique is readily acquired. Hit or miss injections are doomed to failure in the majority of cases. Experience has taught us that certain details are as important as the technique of injection itself.

The following routine is used:

1. The patient may have fluids until one-half hour before the injection. Breakfast is not withheld except for major surgical procedures (prostatectomy).

2. Barbital, grains 10, is given the night before and again the morning of the operation. Most of the barbiturates in equivalent doses are satisfactory. Barbiturates are essential to prevent reactions and are helpful in calming the patient. A small dose of morphin also may be given before major surgical procedures. Scopolamin has been extremely unsatisfactory in our experience and, in fact, is definitely contraindicated.

3. Needles must be sharp and straight, and should be handled gently. No injections should be made without first aspirating and, if blood is withdrawn, the needle must either be removed and replaced or moved far enough so that there is no more bleeding before injecting.

4. Thirty cubic centimeters of fresh, sterile solution of procain (two per cent) is injected into the sacral canal when the caudal block is done alone. For the combined caudal and transsacral block, 30 cubic centimeters of one per cent solution of procain is put in the sacral canal and 10, 8, 6 and 4 cubic centimeters, respectively, in the first, second, third, and fourth sacral foramina. One hundred cubic centimeters of one per cent solution is the maximum that should ever be used, and the amount should be decreased, according to the weight, age, and general condition of the patient.

5. Twenty minutes should elapse after simple caudal injection before starting the operation. When the transsacral block is used, anesthesia will be complete, as a rule, as soon as all of the foramina have been injected.

6. The anesthesia should be tested by pinching the perineum with a small hemostat without warning the patient, but simply watching his facial expression. The patient should never be asked "does this hurt?" It puts him on edge and makes him feel that the surgeon is not sure that he will not be hurt when the operation begins. I have never known a patient to remain silent if the anesthesia were poor.

7. The patient should be kept flat, or in a slight Trendelenburg position for four hours after transsacral block.

CONCLUSIONS

1. Our experience with caudal and transsacral anesthesia has led us to believe that this method, as well as other methods of regional anesthesia, is not only suitable for many surgical procedures but definitely indicated for patients who are bad risks.

2. These methods would be in more general use, and the results would be better if these injections for regional anesthesia were done by anesthetists who would take the pains to become proficient in the technique.

384 Post Street.

REFERENCES

1. Johnson, Clark M.: Regional Anesthesia in Urology, Jour. Amer. Med. Assn., 93:1942-1944, 1929.

2. Labat, Gaston: Regional Anesthesia—Its Technic and Clinical Application. W. B. Saunders Company, Philadelphia and London, 1924.

DISCUSSION

Frank Hinman, M. D. (603 Fitzhugh Building, San Francisco).—The discussion by Doctor Johnson of caudal and transsacral anesthesia is very good, and I agree with him fully as to the indications of use of these methods of anesthesia.

Nearly all my recent anesthetics in private practice have been given by Doctor Johnson. There has been practically 100 per cent success of the anesthesia when the transsacral method has been used, but there have been a number of failures with simple caudal anesthesia; so much so that I am inclined to discard its use altogether. It is a great disappointment to both the patient and surgeon to find, after caudal needling, that no anesthesia has been obtained.

This is the sole objection to caudal anesthesia. If it always worked, it would be the ideal anesthetic for conditions mentioned by Doctor Johnson. In cases of perineal operations which require an hour or longer, the transsacral anesthetic, as a rule, wears off, so that it needs to be reinforced with gas and oxygen. There is, of course, no real objection to this, because a minimum of gas and oxygen may be used. Recently, the use of procain and nupracain has secured a much longer anesthesia than procain alone.

Transsacral anesthesia is the ideal one for perineal prostatectomy.

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A. M. Meads, M. D. (251 Moss Avenue, Oakland.—Doctor Johnson's paper on caudal and transsacral anesthesia gives us an excellent review of the subject, and of his personal experience. There is no doubt that this type of anesthetic, from the urologic point of view, can be most satisfactory where surgery of the bladder and of the prostate are concerned. However, there are certain drawbacks in its practical application which have made me, although once enthusiastic about it, rarely use it now.

Some years ago, on visiting the Mayo Clinic, I found that practically all operations on the lower urinary tract were carried out under caudal and transsacral anesthesia, the anesthetic being administered by a trained anesthetist with about 20 per cent failures. A year ago, however, on visiting the Mayo Clinic again, I found that on the urological service caudal and transsacral anesthesia had been entirely replaced by spinal anesthesia; not because the former was not satisfactory, but because spinal anesthesia gave equally good results, with no more mortality or severe reactions. Furthermore, the percentage of failures from spinal anesthesia was decidedly less than that with the caudal and transsacral anesthesia, and the area anesthetized was so much greater that the use of local anesthesia in the suprapubic area was unnecessary.

My personal experience with this type of anesthesia began some years ago, and my results in the first few instances were so satisfactory that I grew enthusiastic. Then one of my cases developed a convulsion on the table during the injection of the novocain solution into the sacral canal, causing me considerable anxiety. Later we had failures in several of our private cases, which were extremely annoying both to the patients and to me. We also found the technique difficult and time-consuming, as we had no anesthetist trained in this method.

On taking up spinal anesthesia again, we found that we saved much time thereby, had far fewer failures, and no more serious reactions than when we were using caudal and transsacral anesthesia.

Caudal and transsacral anesthesia will probably never be popular except in institutions where trained anesthetists can administer it and have the patient ready for the operator at a given time. However, as Doctor Johnson has said, when once administered properly, there is no better anesthetic in selected cases.

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Charles F. McCuskey, M. D. (2439 North Commonwealth Avenue, Los Angeles). — The factors influencing the selection of an anesthetic agent or method vary according to the individual patient and surrounding circumstances. Too frequently the ultimate selection is determined by the inability of the attending anesthetist to produce satisfactory anesthesia of the type indicated. When a surgeon or anesthetist allows this situation to arise, they are relegating the welfare of the patient to a position of minor importance. The type of anesthetic used on each case should be given the same consideration as the type of operation contemplated, taking into consideration at all times the patient's comfort and safety during and after the surgical procedure.

The success of regional anesthetic procedures is dependent upon the skill of the anesthetist in producing anesthesia with a minimal amount of pain. Unlike general anesthesia, the patient is capable of judging the success or failure of the procedure. When the site of operation is limited to the area inervated by the sacral nerves, it is very unusual to find a patient postoperatively who has not been pleased with the anesthetic procedure. In a series of over eight thousand operations performed under caudal and transsacral block anesthesia administered by my associates or myself, approximately 95 per cent had satisfactory anesthesia. For operations on the rectum, excluding posterior resections, better than 99 per cent successful anesthesia can be obtained.

Untoward reactions to procain may be due to an intravenous injection or to a rapid absorption of the solution. An intravenous injection of procain is characterized by temporary loss of consciousness, with or without convulsions, respiratory depression or paralysis, and slowing of the pulse rate to forty or less beats per minute, the degree of these symptoms depending on the amount of solution injected.

Symptoms due to rapid absorption of the procain come on slowly and are characterized by pallor, nausea with or without vomiting, slowing of the pulse rate, and the usual appearance of shock.

The administration of oxygen and carbon dioxid is usually sufficient to overcome these symptoms. If sufficient procain has been injected to paralyze respiration, this must be done promptly by artificial respiration until normal respiration is restored. Procain is broken down in the liver to one of the acids of the paramino group and then eliminated through the kidneys. For the milder type of reaction, the administration of caffein sodium benzoate or adrenalin may be sufficient. Severe untoward reactions are very uncommon and the milder type occur in less than 0.5 per cent.

RUPTURED APPENDIX IN CHILDREN: ITS MANAGEMENT*

By Conrad J. Baumgartner, M.D.
Los Angeles

Discussion *by William J. Norris, M.D., Los Angeles; Ezra S. Fish, M.D., Beverly Hills; George Thomason, M.D., Los Angeles.*

THE subject of appendicitis, though admittedly well worn, continues to present many serious and important features; particularly so when dealing with children. It is obvious that the public at large, and physicians to no small degree, are as yet not aware of the possible seriousness of the average so-called "stomach ache" in children. In a recent series of one hundred consecutive operated cases of appendicitis in children, occurring at the Children's Hospital, we find an appalling number ruptured, namely, 55 per cent, eight of whom had a generalized peritonitis which proved fatal in five. The explanation lies simply in the failure of parents and, at times, physicians to appreciate early the danger that might exist in the simple complaint of the child, of "pain in the abdomen."

In the series mentioned twenty-five, or almost half, were not admitted to the hospital until after the fourth day, and only three came in within the first twenty-four-hour period; while of the thirty-six acute cases that had not gone on to rupture, twenty-one, or 60 per cent, came into the hospital within twenty-four hours after onset of symptoms, and only four later than four days. The younger the child the less likely will its abdominal pain receive early serious consideration. In the nonperforated acute group, the average age was nine years and the youngest child five, while in the perforated cases the average was six with twenty-five children *less* than five years of age. The not infrequent association of sore throat, nasal colds, and middle-ear infection with the onset may further lead to a mistaken diagnosis and delay, and physics continue to be given in most cases. In this series nine children had a severe cold or sore throat at the onset, one had an otitis media, one had pneumonia, and another had an empyema; and at least twenty-nine had been given physics. The presenting complaints were quite varied. Some 76 per cent complained simply of pain in the abdomen, while in the remaining number the complaints were scattered among the following: fever, sore throat, sick, pain in the navel, and vomiting; and in only 12 per cent was the presenting complaint "pain in the right side."

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* Read before the General Surgery Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

PHYSICAL FINDINGS

As to the physical findings: localized tenderness and rigidity occurred in 80 per cent, with some generalized tenderness in 50 per cent, generalized abdominal distention in 25 per cent, and a palpable mass in about 25 per cent. Acutely inflamed throats were present in six (10 per cent), two had signs of pneumonia, and one an empyema. The average white count was 20,432, as compared with an average count of 16,692 in the acute appendix. The urines of only nine were negative throughout; twenty-two had an occasional pus cell; three had numerous pus cells; eight had an occasional red and pus cell; albumin was present in four, and acetone almost without exception. These findings, as given, obviously have nothing to do with the management of the ruptured case. I am merely pointing them out to show the various pitfalls that allow such a high proportion of children to go on to rupture.

OPERATIVE PROCEDURES

Notwithstanding that there had been serious delay in bringing the children to the hospital, the interval from admission to operation was only an average of six hours. Although I believe it is quite universally agreed that operation should be delayed until localization has taken place in an obviously spreading generalized peritonitis, yet one should weigh heavily the possibility of a localized lesion becoming generalized while procrastinating.

The type of incision in this group was about equally divided between the classical McBurney incision and some type of right rectus incision. Though the duration of stay in the hospital was somewhat less in the former, it is quite evident that in the right rectus group we were dealing with children seriously ill, and with a greater percentage having a generalized infection. McBurney's incision is, however, to be preferred in cases of well-defined localized abscess where one can cut directly down on the abscess without opening the general abdominal cavity.

The appendix should be removed in all instances where one can do so, without mauling and without getting into clean territory. In this series the appendix was removed in forty-six of the fifty-five cases. Drainage was established in all fifty-five patients, including the eight with generalized peritonitis. While I am not convinced of the value of drainage in generalized peritonitis, it is obvious that drainage continues to be considered the method of choice at the Children's Hospital. The ruptured appendices can be roughly placed into three groups: (1) The group in which there is a well walled-off abscess, where only local drainage is necessary. (2) The group in which there is only moderate walling off, with localized peritonitis. In this group I prefer to place one Penrose drain in the right gutter, one in the ileocecal region, and one to the pelvis. (3) The generalized peritonitis group. In these one should either not drain at all, or copiously.

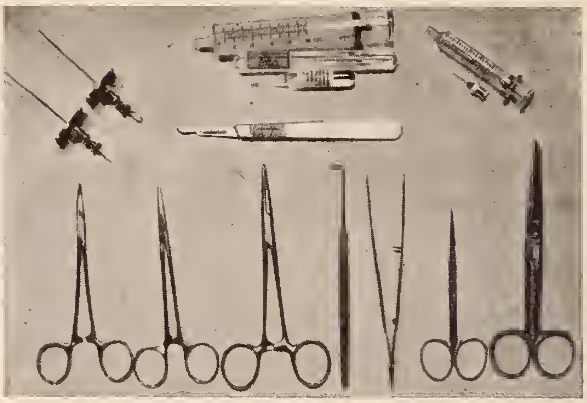

Fig. 1.—Tray setup showing armamentarium used for venotomy.

Frankly, I do not believe that we have made any advancement whatsoever in operative technique in the past fifteen years. There has been, however, one distinct singular advancement in the postoperative care of these children. I refer to the use of the continuous glucose drip, or venoclysis, in association with the indwelling nasal tube.

CONTINUOUS GLUCOSE DRIPS VENOCLYSIS

Without exception every child with a ruptured appendix has acetone in the urine. Formerly the administrations of fluids and the combating of ketosis, toxemia, and hypochloridation had been a notoriously haphazard routine in children. Proctoclysis was not tolerated at all in children, hypodermoclysis poorly, and repeated intravenous injections were most difficult to administer. Since the introduction of the slow glucose drip by Matas, this method of administering fluid has been in constant use in the various departments of the hospital with, I believe, universally gratifying results.

Armamentarium. — The armamentarium used is relatively simple, as shown in the illustration (Fig. 1). A separate tray is set up, having chiefly small scissors, mosquito forceps, a small Bard-Parker knife, a small aneurysm needle, 00 catgut and several intravenous needles of different sizes. The solutions and apparatus which we have been using is that prepared by Baxters, which consists of an inverted bottle with air-vent tube, tubing and clamp, and a drip bulb somewhat like the Murphy drip, but without the hole in it.

Technique of Venoclysis. — Having decided to use the drip method, it is best to start it while the child is still under the anesthetic on the operating table. In order to save time an assistant may work simultaneously on this while the operation is in progress.

In children it is decidedly simpler to use a vein in the leg than one in the arm, as it is easier on

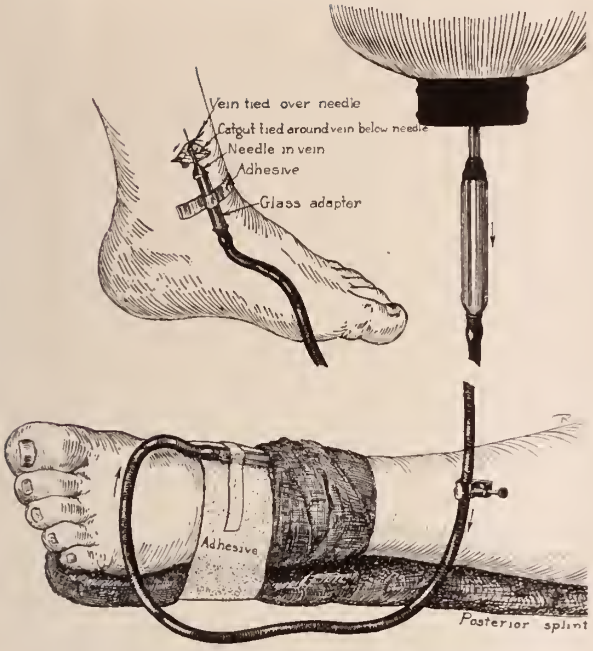

Fig. 2.—Upper sketch shows needle introduced into vein by cutting down just above internal malleolus. Lower sketch shows needle in place connected to venoclysis set and posterior splint applied.

the child, handling is facilitated, and there is not the likelihood of the child pulling it out. It has also been the experience of the residents in the hospital that phlebotomy is preferable to simple introduction of a needle into the vein, not only because of difficulty encountered in introducing a needle into the small vein of a child, but also because it has been felt that thrombosis and occlusion of the needle does not occur as soon where the needle is introduced through an incision and the vein tied, over and behind the needle.

The left leg, being the most accessible, is used (Fig. 2). A padded posterior splint is applied posterolaterally from heel to thigh. A tourniquet may be used, but is not absolutely necessary, as the great saphenous vein may invariably be found by cutting down just above the anterior portion of the internal malleolus. An incision, therefore, transverse to the leg is made about one finger's breadth above the anterior portion of the internal malleolus. The vein is identified and freed, and two 00 catgut sutures carried beneath, tying the most distal one above the vein and leaving the upper one to be tied over the needle after it has been inserted. A small V-shaped opening is then made with a small scissors, the needle is inserted, the glucose apparatus solution connected, and the upper catgut tied above the vein. A stitch or two may be taken in the skin, and the tubing secured to the leg with adhesive. The first 100 cubic centimeters of solution may be allowed to run in rapidly, and then the frequency of the drop cut down to the desired number per minute. The accompanying table was compiled by Dr. R. W. Mapes of the hospital, and shows a rough schedule for the amount of fluid given these children of various ages, and the estimated number of drops per minute necessary to maintain that intake (Table 1.)

Table 1.—*Outlining Amount of Fluid Given to Children*

Age	Solution	Amount in 24 Hours	Number of Drops Per Minute
Infants up to 2 years	5% glucose in normal saline	60 cc. per pound body weight	6 drops a minute per pound body weight
2-8 years	5% glucose in normal saline	1,200-1,500 cc.	75-95 drops per minute
8-12 years	5% glucose in normal saline	2,500 cc.	130-140 drops per minute

On completion of the anesthetic, with the patient still on the operating table, a nasal tube is passed into the stomach and secured to the side of the face with a strap of adhesive. After the child has been returned to its bed (Fig. 3), the leg is elevated and the drip per minute regulated. The nasal tube, carried to one side of the bed, is left open for constant drainage, and the nurse is instructed to lavage every two hours with two ounces of five per cent soda solution. Wristlets are then applied as illustrated, allowing plenty of freedom, but preventing the child from pulling out the nasal tube or getting at the dressings. We have allowed these children to take sips of water as they wish, since none of it is retained; it gratifies their thirst, and acts as a gastric lavage. By this simple method of treatment the patient is quite comfortable, ketosis disappears within twenty-four hours, a proper chlorid fluid and glucose intake is established, distention is reduced, and the necessity of enterostomy becomes practically nil. Both the nasal tube and glucose apparatus are, as a rule, retained for about four days without trouble. With the apparatus used, glucose reactions are indeed rare. I am informed by Doctor Hyland that he has encountered one fatal anaphylactic reaction, and one in which emboli were present in the leg which could possibly have been attributed to the venoclysis: this out of several thousands that have been given in the hospital in the past five years.

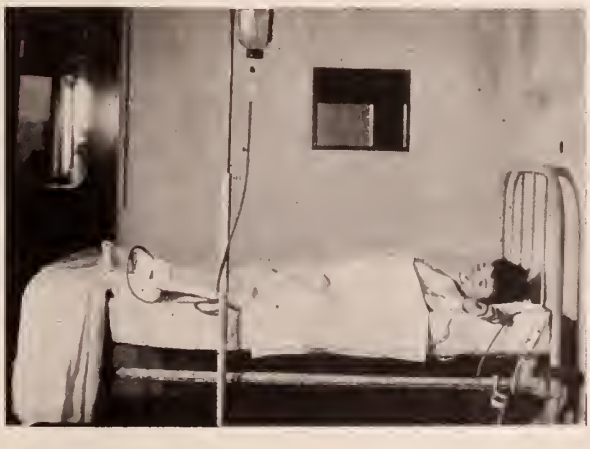

Fig. 3.—Photograph showing glucose drip setup and nasal tube inserted.

We have felt that pitressin has helped in the prevention of postoperative distention and paralytic ileus. Potter and Mueller of Bellevue Hospital have shown that the effect of the drug was merely that of maintaining tone, and that there was no clinical evidence of increased peristalsis. The amount given varies according to the age of the child. A fourth to a half cubic centimeter is given every four hours for three days, the first dose being administered directly following the operation, when copious hot packs to the abdomen are, likewise, begun. For postoperative sedatives the insertion of a rectal suppository, containing three-fourths grain of sodium amytal for infants below two years and one and one-half grain for older children, gives gratifying relief. This is fortified by codein or morphin, bearing in mind the danger of giving morphin to the infant.

POSTOPERATIVE COMPLICATIONS

Postoperative complications are varied and must, of course, be managed as they appear. In the series a fecal fistula developed in one which closed of its own accord. In another, after the drains had been removed on the seventh day, an abscess formed, which four days later spontaneously ruptured into the bowel. Another case developed an acute intestinal obstruction on the fourth day. Two children developed postoperative pneumonia. One developed an acute mastoid, and another developed an acute middle ear. A subdiaphragmatic abscess with a secondary empyema occurred in one. Bilateral parotitis, with recovery, occurred in one. Of the eight cases of generalized peritonitis, three recovered and five died.

CONCLUSIONS

The high incidence of 55 per cent of perforated appendices in children is due almost entirely to delay. If we are going to get anywhere at all in reducing this appalling percentage, it is up to the medical profession to repeatedly remind the public of the possible danger of appendicitis in any ordinary so-called "stomach ache" in children, and to persistently warn against the promiscuous use of laxatives before appendicitis has been definitely ruled out. So far, certain insurance companies and drug firms have carried on a distinct educational campaign in this regard, but the medical profession has not undertaken any definite educational program in this respect.

The frequent associations of nasal colds, sore throats, and middle-ear infections are particularly misleading, and parents as well as physicians must realize that their presence with an abdominal pain does not necessarily rule out appendicitis.

The use of the continuous glucose drip in conjunction with the indwelling nasal catheter has been a distinct advance in the postoperative care of these children, not only in that it provides greater comfort, but also in that normal body chemistry is restored and toxins relieved in the quickest possible manner.

939 Pacific Mutual Building.

DISCUSSION

William J. Norris, M. D. (1136 West Sixth Street, Los Angeles).—The number of cases of ruptured appendices mentioned by Doctor Baumgartner is sufficient reason for bringing up this subject even more frequently than has been the case in the past.

There are certain facts that should be borne in mind when examining children in an effort to determine the presence or absence of an inflamed appendix. The approach to the patient should be studied, and sufficient time taken to gain the child's confidence in order that real muscle spasm may be differentiated from the spasm present in an apprehensive child.

The existence of diarrhea, associated with a ruptured appendix, is far more common than seems to be generally recognized, so that one should not be misled, as Doctor Baumgartner has indicated, by the presence of symptoms not commonly associated with this condition. A rectal examination will frequently make a diagnosis, and is altogether too commonly overlooked.

The question of when to operate is always one which gives rise to differences of opinion. The only cases, in my humble opinion, which should be observed, are those in which a definite history of improvement before the time of consultation has been obtained. If a child, said to have been an extremist two or three days previous to the time of its being seen by the surgeon, has definitely improved in every way, and there is evidence of localization, it would seem advisable to wait for further localization. With this one exception, I believe that operation is indicated following the restoration of body fluids.

The continuous drip, associated with an indwelling stomach tube passed through the nose, has without question saved many lives, and, as the essayist has stated, should be routine treatment where indicated.

In a series of one hundred cases which immediately preceded this past one hundred cases, the percentage of ruptured appendices was sixty-five in contrast to the 55 per cent just reported. This should encourage us to continue our efforts to educate parents and assist doctors in making early diagnoses.

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Ezra S. Fish, M. D. (9615 Brighton Way, Beverly Hills).—Doctor Baumgartner's paper brings out forcibly the high incidence of perforated appendices that occur in children. While it is true that perforation of the appendix is prone to occur more quickly in childhood, the chief reason for the high incidence, as Doctor Baumgartner has emphasized, is delay.

One would not think it necessary that so much emphasis should have to be placed upon the fact that appendicitis does occur in childhood, and upon the necessity of early diagnosis.

Apparently, the idea of dietary indiscretions—food upsets and stomach upsets, causing fever and abdominal pain—is so firmly imbedded in many parents' minds that the possibility that their child has an inflamed appendix does not occur to them. Many parents, further, are under the impression that children do not develop appendicitis.

To remove such misconception and misunderstanding, it is obviously necessary that the danger of appendicitis be continuously brought to their attention by such a paper as Doctor Baumgartner has presented here. I agree entirely with him in his plea that the medical profession add their efforts to those of the insurance companies and other agencies in developing an educational program that will make the public, first, appendix-conscious and, second, fearful of the danger of delay.

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George Thomason, M. D. (1219 Hollingsworth Building, Los Angeles).—Any discussion is profitable that will make clearer a disease ordinarily dangerous at any age, but doubly so in the very young. Doctor Baumgartner has thrown considerable additional light on the subject in his illuminating paper.

In young children acute appendicitis is certainly more treacherous than it is in later life, because of:

1. Greater difficulty in accurate early diagnosis.
2. The greater frequency with which cathartics are given; in which case, as Lord Moynihan states, "the mere giving of a laxative is indication enough for instant operation," but which procedure, unfortunately, is not sufficiently frequently adopted because of the persistent belief on the part of parents that the case is one of indigestion,

and more purgation is likely to be resorted to rather than the calling of a physician.

3. The relative shortness of the omentum in children, preventing the proper functioning of this tissue in walling off the appendix area as it so helpfully does in adult life. Thus general peritonitis is made more possible in children than in cases of appendicitis later in life.

4. The thinness of the appendiceal wall in children undoubtedly leads to more frequent rupture of the appendix in children.

5. The comparative inadequacy of its blood supply, which is a terminal blood supply in the appendix, making more possible rapid degenerative processes, particularly in the meso-appendix, extends only half the length or less toward the tip of the appendix. This is illustrated in Doctor Baumgartner's paper, in that he states 55 per cent of the cases had ruptured.

6. In children the usual regular sequence of symptoms and findings is by no means so constant, therefore resulting too frequently in a wrong or a delayed diagnosis of the true condition.

In dealing with children suspected of having acute appendicitis, one should surely constantly keep in mind the possibility of pneumonia. There are, undoubtedly, cases in which children are operated for supposed acute appendicitis, and in which pneumonia is an apparent postoperative complication, when, in fact, it is primarily a case of pneumonia in which an appendectomy has been performed.

Adams and Berger reported a typical series of 145 cases of pneumonia in patients between two and fifteen years of age, in 17.5 per cent of which the diagnosis was acute appendicitis.

In every case the chest should be very carefully examined. In pneumonia in a child, there is usually a higher temperature and higher leukocyte count, a different type of breathing, and the noticeable characteristic movement of the alae nasi, but often the temperature and leukocyte count may at times fail to lead one to a correct differentiation.

The outline Doctor Baumgartner gives so specifically with reference to the postoperative care is to be most highly commended. We believe it a good plan to siphon the indwelling nasal tube at different intervals and then to close it for a time, unless nausea be present, in order that the upper intestinal secretions be not entirely lost through constant drainage.

LATENT SYPHILIS*

By William H. Goeckerman, M. D.
Los Angeles

Discussion *by George V. Kulchar, M. D., San Francisco; Harry E. Alderson, M. D., San Francisco; Louis F. X. Wilhelm, M. D., Los Angeles.*

WEBSTER defines the meaning of the term latent as not visible or apparent, concealed, dormant. Strictly speaking these meanings can be applied to a syphilitic infection, with reservations only. It should be recalled that the process may be pathologically or biologically active, yet not apparent by any clinical examination at present at our disposal. I will, therefore, use the term as meaning nothing more than clinically not recognizable syphilitic infection at the time of examination. A clinical diagnosis of latent syphilis assumes a very careful physical examination by all the means at the command of modern medicine. If such an examination is negative, the diagnosis must rest on a positive serologic test, on a clear-cut history of infection, in the female on the birth of a syphilitic child, under special circumstances on gland puncture or biopsy, and finally a necropsy. The common knowledge, that we may be dealing with a clinically unrecognizable infection in the presence of a pathologically and biologically active process, presents a fascinating but at times difficult treatment problem, both from the standpoint of the individual and the public health.

COMMENT

There seems to be no division of opinion on the necessity of systematic treatment to prevent spread of a syphilitic infection, including transference of the disease to the progeny. When the probability of contagiousness is still present and the patient is not intolerant to the drugs now usually employed, treatment is obviously indicated. When it is a question, however, of the individual's future welfare and the prevention of late complications, the treatment problem becomes decidedly more complex and should not be met in a routine manner. Various modifying factors must be considered before deciding on the course to be pursued. Most observers no longer accept Ehrlich's idea of "therapia sterilisans magna," in the treatment of syphilis, except possibly in the very earliest stages of the infection. In the latent stage the infected individual's immunity mechanism becomes the deciding factor. The chief function of antisyphilitic treatment at this stage is to increase the efficiency of this mechanism. How effectively this can be done is still debatable. There are some who believe that modern treatment predisposes to, rather than prevents late internal complications. Attention has also frequently been called to the possibility of the arsphenamins and heavy metals producing injury to vital organs, which only becomes evident many years later. Probably the only way the exact value of modern treatment can be appraised is a comparison of a large series of patients observed over a whole lifetime, treated as well as untreated. Obviously this is practically an impossibility at the present time. Bruusgaard[1] was able to study a fairly large group, which had never received any treatment, years later. This group was seen in the early and secondary stages, and therefore, not strictly confined to a group that has achieved latency. None the less his findings are significant. According to his studies, untreated syphilis usually runs a benign course, and may frequently be completely eliminated by the patient's own powers of immunity. He makes no claims, however, that might contraindicate modern treatment. His data, also in my opinion, do not speak against judicious treatment. Since treatment must be carried on, let us consider the factors which determine the type, and amount of it in a given case during the latent period.

AGE AND LATENT SYPHILIS

Obviously a youthful individual, sexually active, with the infection of a few years' standing, and viscera in good condition, presents a different problem from the individual who shows no detectable clinical evidence after having carried the infection for many years, whose sex-life has be-

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* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13–16, 1935.

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come of minor importance, and whose vascular mechanism no longer has the proper resiliency. In the former, intensive treatment is by far more desirable than in the latter. In the latter, it is usually much better to follow the principle of stimulating his immunity mechanism than to try to achieve sterilization by strictly massive dosage.

WASSERMANN-FAST LATENT SYPHILIS

The significance of Wassermann fastness in latent syphilis is still not settled. Some observers believe that this phenomenon may simply be a part of the immunity reactions in some patients who harbor the Spirochaete pallida. Studies such as those of Stokes and Busman [2] suggest that a positive serology signifies an active infection. According to their findings it is likely that a diagnosis of latent syphilis is dependent upon the defects of our diagnostic procedures. Warthin's[3] observations also point in this direction. Every syphilographer knows, however, that many a patient with persistently positive serologic tests continues through a whole lifetime without ever showing clinical complications. My own belief is that, while there is a degree of activity in such patients, the immunologic mechanism is so effective that the damage is not sufficient to produce clinical symptoms. It is particularly in such patients that observation for the rest of their lives is desirable. There is every evidence that the serologic tests will eventually become negative in most of them, but there is no necessity to try to achieve this at all hazards by intensive treatment. In fact, in about 30 per cent, this cannot be done. I do not believe that we are dealing with a true latency, such as is seen in the diphtheria carrier for instance, in such cases. A good rule here is to treat the patient, not the serologic tests. If the individual's physical condition is good, every effort should be made to give adequate modern treatment. Methods, of course, vary in the best hands and may be found described in good textbooks. Very enlightening in this respect are the Coöperative Clinical Studies in the Treatment of Syphilis.[4] It would seem good judgment to emphasize the use of the spirocheticidal drugs in the early years and the resistance builders, if such we have, in the later years of the latent period.

THE SPINAL FLUID IN LATENT SYPHILIS

It is a well-known fact that the spinal fluid is positive in a large percentage of syphilis during the early period. As latency becomes established, the fluid has a tendency to become normal either with or without treatment. When the fluid has a tendency to remain positive, it constitutes a definite menace to the future health of the patient, and without treatment practically means eventually some complication referable to the neuraxis. If such a patient has had a reasonable amount of routine therapy and the fluid remains positive, other measures must be considered. Conversely, if the spinal fluid is negative when latency has been reached, the danger of complications and the necessity for repeated spinal fluid examinations become negligible.

PREGNANCY AND LATENT SYPHILIS

It is pretty well conceded that pregnancy has a beneficial influence on the course of syphilis, and the prognosis as to freedom from clinical complications is definitely better in a woman who has borne children. This does not mean, however, that she is not potentially dangerous to her progeny even in the later years of latency. The necessity for careful consideration of treatment is, therefore, much greater in such a patient if there is a probability of future pregnancy.

MARRIAGE AND LATENT SYPHILIS

The question of marriage is usually raised during this stage, and often a difficult one to decide. No definite rules can be stated and each case must be considered on its merits. It can be said, however, that the danger of infecting the partner is much less in the late than in the early latent period. The contagious factor becomes minimal with consistent treatment, and no tendency to relapse. The tendency to late complications and invalidism is not negligible, however, and should always be considered in permitting marriage. Another consideration is the transmission of the disease to the progeny. While an important one, it is not vital because of the effectiveness of preventive treatment of the mother. It is my practice also to consider the age of the contracting parties, and their economic status.

CARDIOVASCULAR SYPHILIS AND LATENCY

All modern studies indicate that involvement of the cardiovascular system may not be recognizable clinically for many years. Sometimes the manifestations are so insignificant that they remain obscure throughout a lifetime, but are quite apparent at necropsy. Much evidence is accumulating that the vascular involvement is a very early one. It is apparent that, if treatment and the patient's immunity mechanism do not eliminate the infection, it will be permanent. Yet the percentage of cardiac invalidism resulting from syphilis is a comparatively small one. There are, however, many students of the disease, particularly in the French school, who believe that syphilis is a very big factor in many forms of cardiac disease. If Warthin's[5] observations are correct, and I believe they are although I cannot agree with his deductions, the heart is particularly apt to harbor the spirochete for a whole lifetime.

My inclination is to be optimistic in regard to the future of the patient who has contracted syphilis, especially if he reaches the latent stage without any pronounced tendency to clinical relapse. Even in patients not treated or very poorly treated, the disease in the majority of instances runs a benign course. With proper modern care it is possible to reduce contagiousness to a minimum, and if the patient will treat before complications have set in, the prognosis for the future in the main is good. I am inclined to this opinion despite of the rather discouraging findings reported by Warthin[6] and other pathologists. I think it can frankly be said that even at present only a small percentage of patients with syphilis receives adequate modern treatment, either during the early stage or when latency has been reached.

1680 North Vine Street.

REFERENCES

1. Bruusgaard, E.: Ueber das Schicksal der nicht spezifisch behandelten Luetiker, Archiv. f. Derm. und Syph., 157:309-332, 1929.

2. Stokes, J. H., and Busman, G. J.: A Clinical Study of Wassermann-Fast Syphilis, with Special Reference to Prognosis and Treatment, Am. Jour. Med. Sc., 160:658-668, 1920.

3. Warthin, A. S.: The Lesions of Latent Syphilis, Southern Med. Jour., Vol. 24, No. 4, pp. 273-278 (April), 1931.

4. Moore, J. E.: Coöperative Clinical Studies in the Treatment of Syphilis, Latent Syphilis, Venereal Disease Information, Nos. 8 to 12 inclusive.

5. Warthin, A. S.: The Problem of Latent Syphilis, Eleventh Pasteur Lecture (Nov. 21), 1930.

6. Warthin, A. S.: The Distribution of Latent Syphilis in the Population, De Lamar Lectures, Williams and Wilkins Company, 1929-1930.

DISCUSSION

George V. Kulchar, M. D. (450 Sutter Street, San Francisco).—At the present time our concept of latency is that of a period of high resistance and low visibility, with an undercurrent of mild inflammatory changes taking place in vital structures. Although virulent treponemata are present in the body, the balance between the host and the invading organism is temporarily or permanently maintained.

The clinical diagnosis of latency is tenable only when the careful examination, laying particular emphasis on the cardiovascular and central nervous system, has revealed no lesions definitely attributable to syphilis. The cerebrospinal fluid must be negative. The more closely we examine our patients, the fewer will be the number that fall into this group.

The blood Wassermann reaction, save as an aid to diagnosis, is of minor importance during latency. The Wassermann that remains persistently positive demands a careful examination to rule out visceral and neurosyphilis. Once this has been definitely eliminated, the Wassermann can be more or less disregarded. While the percentage of Wassermann-fastness varies with the sensitivity of the technique used, the studies of the coöperative clinical group have indicated that Wassermann-fastness in latency in no way alters the prognosis for cure or relapse.

Regarding the cerebrospinal fluid, it is apparent, from recent studies, that if this is negative during latency, the patient may be virtually assured, aside from vascular involvement, that the central nervous system is to be spared.

The decision when to treat the latent syphilitic is sometimes a difficult one to make. Despite the relatively benign course of syphilis, as indicated by Bruusgaard's studies, the relative crudity of our methods of examination, and the very small and isolated lesions in vital structures capable of producing the most disastrous consequences, make it desirable to lean toward the side of treatment. However, if the patient is beyond the age of fifty, and it can be established that the infection is of more than twenty years' standing, treatment is not necessary. In order to safeguard the immunity relations in latency, treatment should not be started unless it will be carried to completion. The standard course of treatment should include twenty injections of an arsphenamin and from forty to sixty injections of heavy metal, preferably bismuth. In early latency, treatment should be continuous; but if the infection is more than four years' duration, rest periods apparently do not influence the ultimate outcome.

While the natural tendency of syphilis is toward spontaneous cure, by treatment of latent syphilitics, the percentage of satisfactory results, as measured by prolonged good health and freedom from manifestations of syphilis, can be increased from 35 to 85 per cent, and progression and relapse decreased from 20 to 30 per cent in untreated latency to from 2 to 5 per cent by adequate treatment.

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Harry E. Alderson, M. D. (490 Post Street, San Francisco).—The author has presented this difficult and more or less obscure question in a very interesting manner. He leaves little additional to say. In my opinion, for the present, we shall have to regard all patients with persistent complement-fixation reactions and no other symptoms as having foci of treponemata pallidae in some organ or tissue.

The treatment, however, should depend largely upon the age of the patient. Naturally, young persons with latent syphilis may have children, and they should have persistent treatment until the serologic signs are favorable, provided *there are no contraindications*. Arsphenamin, bismuth, mercury and the iodids should be given along with some form of shock therapy, and every effort should be made to build up the patient's resistance by means of various forms of physiotherapy.

With elderly patients whose infection apparently has not done any serious damage and who are clinically well, to my mind it is better not to run the risk of injuring important organs by heavy antiluetic treatment. Such patients should be given mercury, or bismuth and iodids, more or less continuously. They should be checked up occasionally and naturally in the presence of complications, more active therapy given then, cautiously. We all have seen elderly syphilitic patients who were doing very well until active antiluetic therapy was started, and then developed serious troubles attributable to the treatment.

Until we know that a persistent Wassermann may exist in a nonsyphilitic patient, we shall have to continue to treat these individuals. This question may be settled within the next few years.

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Louis F. X. Wilhelm, M. D. (727 West Seventh Street, Los Angeles).—The management of latent syphilis, as brought out by the author, often is a real problem. The age of the individual, naturally, is a real factor in determining one's approach. In recent years, with the more general use of the serologic tests, many cases of otherwise unrecognized infections are uncovered. If we find a latent syphilis in an individual past the three-score age, we need not be concerned with treatment. On the other hand, when we are dealing with an individual in the twenties, or even thirties, our whole approach changes. Here we must treat the infection. The paper of Stokes and DesBrisay, in which they present the results of several hundred cases of late complications, would compel one to insist on adequate treatment. They found that the extent of severe late complications was almost directly proportional to the degree of inadequacy of the previous treatment in the early years of the infection. In other words, the severity of late complications became definitely less as more and better treatment had been givn. The greatest number and severest complications were found in those individuals who had received absolutely no treatment. Oral treatment with the iodids showed a definite though slight benefit. The addition of mercury by the mouth added another slight improvement. The use of intramuscular injections of mercury again showed better results. Finally, the addition of the arsphenamins showed the group with the least complications. This study certainly agrees with the author's view that latent syphilis should receive carefully controlled, adequate treatment.

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Doctor Goeckerman (Closing).—I am glad to note that the discussion agrees on judicious individualized treatment of latent syphilis. It is apparent that a persistently positive Wassermann is an incidental finding, and does not necessarily require intensive treatment to reverse it. On the contrary, the patient, not the Wassermann test, needs the treatment.

THE LURE OF MEDICAL HISTORY[†]

RATIONAL OR LIBERAL MEDICINE[*][‡]

AS UNDERSTOOD SOME "FIFTY YEARS AGO"

By Joseph P. Widney, M.D.
Los Angeles

PART II[**]

MEN sometimes ask me of what school of medicine I am. I am always puzzled to answer.

Schools in science imply distinctive theories or dogmas. As there are no such distinctive theories or dogmas to this, it can have no specific or definitive name. It is simply the science of medicine, as one speaks of the science of chemistry, or of astronomy. I can only reply: "I am a physician; and my system is only known as the science of medicine; because of its freedom from hampering dogmas, and instead its search after causes, it might be termined "rational medicine"—sometimes called regular medicine. It is sometimes, by persons unacquainted with it, called allopathy, but mistakenly. It might as well be called hydropathy, or homeopathy, or eclecticism; and yet it is neither. And yet, in a certain sense, it is all of these; for all of them are only one-sided views of some phase of its broader and more rational development. As before stated, distinctive names imply dogmas, and dogmas are narrow and one-sided. They belong to the early, the youthful, the immature ages of science. Schools of medicine, or of any science, belong to a lower plane. On the higher plane of true science, schools drop away. Science is one. There was a time when one might ask of an astronomer, or of the chemist, to what school of astronomy or chemistry do you belong? Now we do not ask so. With increasing knowledge the schools have dropped aside. Now the reply would be simply: "I am an astronomer," or, "I am a chemist."

So in medicine. Rational medicine has passed beyond the narrowness of restrictive dogmas, and calls itself by no distinctive name. It is only the science of medicine; and its practitioners call themselves simply physicians.

ORGANIZATION OF THE PROFESSION OF MEDICINE

The profession of medicine is organized, as are the other professions, because through organization the ends of science may best be furthered. Organization does not imply sameness of thought or views. Probably no two members of the profession think in all things alike. This is not the object or purpose of organization. An organization which meant dogmas and sameness would be death to progress. These are the things which it seeks to avoid. Its constant labor is to encourage variety and originality of thought. The objects of organization are:

To combine forces for more successful and thorough investigation of questions of medical science, and to diffuse information about new discoveries and advances. As illustrations may be cited new discoveries and advances. As other expressions may be cited the monthly meetings of the numerous county medical societies all over the land, the annual meetings of the state and national medical associations, and of similar bodies in all civilized lands, and the periodical gathering of the International Medical Association. Also may be cited the hundreds of medical and surgical journals published all over the civilized world.

A second object of organization is to carry on more successfully and thoroughly the work of medical education. As results of this may be pointed out the colleges of medicine which dot all lands, with their large aggregation of capital invested in buildings, libraries, scientific appliances, and the extensive laboratories for experimentation connected therewith. This heading may also include the duty of establishing and enforcing among the colleges a recognized standard of efficiency and thoroughness in educational work. The fruits of this are seen in the progressive advancement from the simple pupilage, for a short term, under some practicing physician, or the single course of lectures of the earlier ages, to the two years, and now the three years, of carefully graded lectures and hospital work, and the rigid examinations, before the student becomes eligible to the degree of Doctor of Medicine. And recognition is refused to colleges failing to adopt, and in good faith observe, such advanced requirements in their educational work.

Again may be mentioned, as among the objects of organization, the discouragement of narrow and obstructive systems or schools of medicine.

And, finally, may be mentioned, to establish and maintain a code of ethics for the profession. Recognizing, even in the earliest ages, the semi-sacred character of its calling, the profession has ever laid down, for the guidance of its members, rules of conduct, defining their duties to the sick, to community, and to each other.

The Hippocratic oath, which is probably the oldest code that has been saved to us, and which twenty-three centuries ago was administered to the physician upon commencing his practice, had in it the groundwork of a strong ethical morality; and from that day to this, through all the long ages, the moralities of the profession have never been lost sight of, and the oath of Hippocrates has broadened out into the pure and lofty code which is made binding upon every physician, and which in the fullness of its requirements does not yield precedence even to that imposed upon the minister or the priest when admitted to his sacred calling. It is true, many unworthy members of the profession fall far short of its standard in their daily conduct; yet the code is there, ever standing as a written reproach to them, and in proportion as they fail to come up to its requirements they lose caste and standing among the more honorable members of the profession.

[†] A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

[*] An address delivered by J. P. Widney, A.M., M.D., dean of the College of Medicine of the University of Southern California, before the Unity Club of Los Angeles.

Doctor Widney was the founder of the Los Angeles County Medical Association and of the College of Medicine of the University of Southern California. An interesting biographical sketch of Doctor Widney was printed in the April and May issues, pages 292 and 396.

[‡] Reprint from the *Southern California Practitioner* of April, 1888. See also editorial comments in the June issue of California and Western Medicine (page 461).

[**] Part I was printed on page 513 in the June issue of California and Western Medicine.

RELATION OF RATIONAL OR LIBERAL MEDICINE TO THE VARIOUS SCHOOLS OF MEDICINE

By bearing in mind what rational or liberal medicine is aiming at in its own development, it is easy to infer what must be its relationship toward the various schools, or systems of medicine, which from time to time spring up. It is itself aiming at freedom from dogmas, for these inevitably lead, as it has too often discovered in its own history, to narrow and one-sided generalization.

It has in all these ages of seeking after truth so often felt the evil of such things that it has learned to beware of them. It therefore says to schools or systems basing themselves upon fixed dogmas:

These things belong to the past: modern science has grown beyond them. Such dogmas imply narrowness. It is a step back toward the dark ages again. Only the broadest freedom of investigation should be recognized in scientific research. Because you have thus abandoned the broader field, and have restricted your research to the narrow limits of a fixed and unchangeable creed, we cannot accord to you full recognition as broad and progressive members of a liberal profession. Science knows no boundary lines of creeds; and in the ranks of scientists the days for shibboleths have gone by. It is *because* you have abandoned the broader field of rational medicine, and *because* you are hydropathic physicians, or eclectic physicians, or homeopathic physicians—men whose science is bound up by a preconceived and inflexible theory, and because you are not simply *physicians,* men free to seek for, and to use, truth wherever found, that you are not accorded recognition as worthy representatives of a liberal and rational medicine. It is because you load yourselves down with clogs in the shape of *pathies,* and tie the load on by a distinctive name. Liberal medicine refuses to so encumber itself with clogs: ties itself to no set theories: binds itself by no name distinctive of a fixed creed: and so has to unload itself of no fixed burden of clogs when it would advance.

To the individual members of these schools Liberal Medicine says: Recognition is not withheld from you because you, as individuals, hold some theories of disease and of treatment which we consider narrow and ill-founded, for many individual men within the ranks of liberal medicine hold opinions probably deemed by their fellows equally odd, and yet are simply looked upon with a lenient smile as men who have some queer fancies; but it is because you elevate the fancy into a dogma, and build thereon a sect, and tie yourselves to it, making it a restrictive creed for education, and a test of standing. It is not because you, as an individual, are considered to hold only a partial truth, for many within the ranks of regular medicine fail to grasp the breadth of its teachings, and all their days are only as lame men in the pathway, but because you insist that this is all of truth and restrict yourselves to it.

Liberal medicine has tenets and treatments which resemble from one point of view homeopathy, others which resemble hydropathy; but it recognizes the fact that these are only partial and incomplete views, and are not all, but that more lies beyond. It lifts its eyes from the single hills toward the eternal highlands which it knows must tower through the mists above and afar. It may as yet catch only partial glimpses of that higher ground of medical science, but it feels that somewhere, on through the mists, it lies; and will be content with no resting place that is short of that goal. And it may be that the limits placed upon human knowledge by human weakness make the goal an unattainable one. Still it will climb the higher by being content with nothing less.

Another reason why the profession of liberal medicine has declined to accord recognition to these various schools and systems, is the character of the educational work which they permit within their ranks.

The constant struggle of rational medicine is to raise the standard of education. Under this endeavor the standard has been raised, as has already been stated, from the old-time country reading and a certificate, or possibly a single course of lectures, to a three years' graded course, with clinical work in the hospitals, and rigid examinations. And the tendency is toward a still higher standard. It is not unfair to say that this effort to raise the standard of education upon the part of liberal medicine has not been met by a corresponding effort among the schools or systems enumerated. While there have been some honorable exceptions, the general standard has been low, and without a well-expressed desire or intention of a change. It is no unfair or unjust rule which rational medicine applies to these schools, for it applies the same test to itself. The so-called college of rational medicine which does not conform to the requirements of the higher education, or which lowers its grade, at once loses caste, and is refused recognition. And this is the point in which those of the schools in these systems, which attempt the higher education, fail of reaping the just fruits of their more honorable work. For instead of declining to recognize the colleges which cling to the inferior standard of education, they continue to recognize them as legitimate institutions of learning, and admit their defectively educated graduates to an equal standing with their own who have honestly done better work. In this way they practically neutralize the effect of their efforts to elevate the standard of their colleges.

A very proper reply was given a few years ago by the English National Association of Physicians to an application upon the part of a numerous body of one of these schools for recognition by the regular profession. The reply was this:

"Before we were recognized as fitted to become members of the profession we had to go through a thorough course of study, and pass rigid examinations. Give proof that you can stand the same tests and you will receive recognition."

The offer was declined, and of course recognition was withheld.

This rigid stand is taken by the profession of liberal medicine upon the question of education, because it is felt that where human health and human life are at stake only the most thorough possible preparation for the work should be tolerated; for even then the physician will too often be made to feel how limited are his powers of relief, and how much yet remains to be learned.

THE FUTURE OF MEDICINE

Medicine is not yet an exact science. Possibly it may never be, for of all branches of human knowledge it probably is hedged about by the greatest difficulties. Yet it stands today far in advance of its position a century ago; and a century ago it stood in advance of its position of a century before. Age by age it is climbing higher. Age by age it is penetrating deeper and deeper into the mysteries of disease, of its causation, of its cure. And no one realizes with more sadness than does the educated physician the vastness of the field which is still a terra incognita; and no one who has not stood with him in the midst of the perplexities and anxieties of his toiling, can realize the keenness with which he feels the slurs so often wantonly cast upon his work by tongue and by press. It is a cruel wound to give to what is probably today the most conscientiously self-sacrificing of all the callings of man. The cruelty of the wounding can only be excused by its thoughtlessness. I, who, after years of toil in this work, am no longer seeking its rewards, may say these things as one might not who may be but just entering upon its labors. I plead for the incoming generation of toilers in this sacred field, a juster appreciation upon the part of that public to whom the toil is given. And I plead a juster discrimination in judging of men. To the public any man who puts up his sign and calls himself "Doctor," is a physician. And yet many of these are men without even the pretense of medical education. And for their misdeeds, for their ignorance, the profession must share the obloquy and the shame, for the public does not stop to discriminate. And yet it is not the fault of the legitimate profession of medicine that such is the case. Scarcely a session of a legislature goes by in any state that the request does not come up from the organized profession for laws to weed out the unworthy; for laws establishing tests of examination as to knowledge and scientific attainments, before men shall be permitted to take into their hands the care of human life.

"We," they say, "who daily are called upon to witness the harm done by men who have in no way qualified themselves to battle with disease, and yet who, with mercenary motives, enter upon the work, we ask you to establish tests; require examinations; make men first prove their fitness, as you do with engineers upon your steamboats, or with lawyers at your bar. We ask no favor. We do not ask exemption from the working of the law for ourselves or for our colleges. Require the test of all; and then debar the ignorant, the unworthy, from entering upon this work."

This is what the profession asks. It is the public which through its representatives refuses; and, where laws are passed, through its juries, refuses to enforce. Ought it not then, in justice, to withhold its censure?

BUT THE FUTURE? WHAT OF THAT?

This I have to say, that while man dwells upon the earth there will be pain, and disease, and death. It is the order of nature. Yet we are learning all the while more effective means of easing and controlling pain; we are discovering, year by year, more effective methods of preventing disease, and of battling with it when it has come; we are devising better ways of warding off epidemics; we are, with the more careful elaboration of sanitary measures, steadily lowering the average per cent of disease in population, and adding to the average length of human life. It is not all; yet it is something. Indeed, when we read the records of disease and suffering, and the death rate, of even a century or two ago, it seems much, this that has been accomplished.

AND THE QUESTION OF SCHOOLS? OF DOGMAS? OF THEORIES?—WHAT OF THESE?

Time will settle these: time, and more knowledge. As I have already said, one of the merits of rational medicine of today is, that it has learned to beware of positive dogmas and theories, and the schools which are based exclusively upon them. It has found that they are short-lived, and die out; for they are based not upon science, but upon one view of science. Then, if that view proves to be narrow, or mistaken, or false, there is nothing left, and of course they die. It has felt in its own history the evil of these things, and how they may become a clog and a bar to progress. It has learned that even today, with all the great advance which has been made in the accumulation and classification of facts, the stock is not yet sufficient for final generalization; and so has learned to work and to wait. In so varied a field, with a causation so varied, will a single general theory of disease, its causation and its management, ever be possible? It may be doubted. It certainly is not as yet. And so rational medicine, grown wiser than of old, aims to waste no time, no labor, upon problems which are as yet of necessity unsolvable. Instead, its aim now is to delve yet more deeply into the facts, and to push ever higher the standard of medical education. It feels that by this road, and by this road only, is the way to the higher truth.

And to the various schools of medical practice, schools basing themselves upon rigid dogmas and theories, it has only this to say:

"We cannot feel that you are doing the most worthy work. We cannot feel that you are best furthering the advancement of human knowledge. We can only feel that, whether you perceive it or not, you are dropping out of the current of progress; that by your premature generalization, and your rigid dogmas, you are tying your own hands in the battle. It is with no feeling of unkindness we look upon you; yet, standing as you do upon your narrower basis, we cannot recognize you as most worthy members of a liberal science.

"Only, we plead with you to weed out the low-grade institutions of learning in your ranks. Raise, as we are doing, the standard of education, and keep advancing it ever higher. If you are honest in your belief, and we do not propose to question this, you need not fear the light, and increased knowledge. Let these be the test: the dross will disappear, and whatever of good there may be will remain."

And the time will come, in that newer day, upon that higher plane of science, when schools will drop away; and no one shall say "I am of Paul, and I of Apollos," but the science of medicine shall be one: the doctor shall become doctissimus, and he shall be only a *physician,* a healer of men.

Los Angeles, April, 1888.

CONVERSATIONAL GEMS OF DR. J. P. WIDNEY*

Founder of the Los Angeles County Medical Association: At Age of Ninety-Five Still Active in Literary and Church Work

Life is a ladder. We begin at the bottom.

Many a good carpenter has been spoiled by an ambition to become an architect.

The world is constantly looking for people that can be depended upon. Hettie adds: "which causes eyestrain."

A perfect civilization will become a possibility when a perfect man has been developed.

Uneatable weeds are Nature's provision for fertilizing waste lands.

The book that will live is the book that has been lived.

Some people never grow old, and some are born old.

Civilization advances by its breakdowns.

Of all the sources of information in human history, tradition is the most imperishable.

No amount of cultivation can make genius out of a commonplace mind.

It is easier to fight an army of elephants than an army of ants.

A new word does not necessarily mean a new idea.

Reform becomes a form of hysteria. Reformers shout themselves hoarse trying to keep others quiet.

Have your wealth in yourself and not in your pocket.

No amount of cultivation will make a radish out of a turnip.

A hypocrite is a man who prays and preys.

If you would be happy, carry someone who has no legs.

The social turmoil of the world today is not a fight against capital—it is a fight against brains.

It's the continuous rain in Southern California that counts.

Birthdays, like wine, improve with age.

Education may cultivate brains—it cannot make them.

If you would be loved make yourself lovable.

There are times when words become crime.

Scholarship does not necessarily mean culture.

Culture is the ripening and mellowing of scholarship.

Pasadena Avenue is the fading remnant of a dream.

There are many good things and many good people that do not mix well.

A lump of ice will never fry a beefsteak.

The type of architecture of every country has grown out of the climatic needs of that country.

Tomorrow never comes. It is always today. Eternity is one eternal Now.

Many singers think they are singing with expression, when they are only making faces.

The way to keep your credit good is not to use it.

We cannot dress according to the calendar.

Willing shoulders always find their burden.

The surest way to get up in the world is to push other people up.

(To Be Continued)

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* Compiled by Rebecca Davis Macartney.

CLINICAL NOTES AND CASE REPORTS

MULTIPLE CYSTS OF BOTH LUNGS

By F. F. GUNDRUM, M.D.
AND
HAROLD ZIMMERMAN, M.D.
Sacramento

MULTIPLE thin-walled ("soap bubble") cysts of the lungs are not as rare as formerly supposed. They are, however, sufficiently uncommon that it may be worth while to present one more example of this disease.

REPORT OF CASE

H. R. Male. Single. Age 20.

Family History.—Three brothers and three sisters, all living and well. One brother died of "heart disease," as did also his father. Mother living and well.

Personal History.—Very free from all contagious maladies. He had smallpox and occasional tonsillitis.

Condition began gradually two years ago, when the patient noticed shortness of breath upon exertion, which became slowly more troublesome. He is perfectly comfortable when at rest, either sitting or lying. He coughs up a small amount (two teaspoonfuls) of "grayish yellow" sputum each morning, never bloody. All other bodily functions are normal.

The patient is well nourished, healthy-appearing young man; good color, no dyspnea; height, 71 inches; weight, 122 pounds; temperature, 99.6 at 4 p. m.; stasis good.

Head: Scalp clear; hearing good; eyes clear; pupils active; nasal passages clear; frontal sinuses and antra transilluminate well; teeth good; tonsils hypertrophic and very red (probably accounting for the slight fever).

Neck: No enlarged glands; thyroid negative.

Thorax: Well formed, well developed; vocal fremitus diminished over both lowers behind, right more than left; circumference at nipples (at rest 36, expiration 35½, inspiration 37); percussion note somewhat hyperresonant

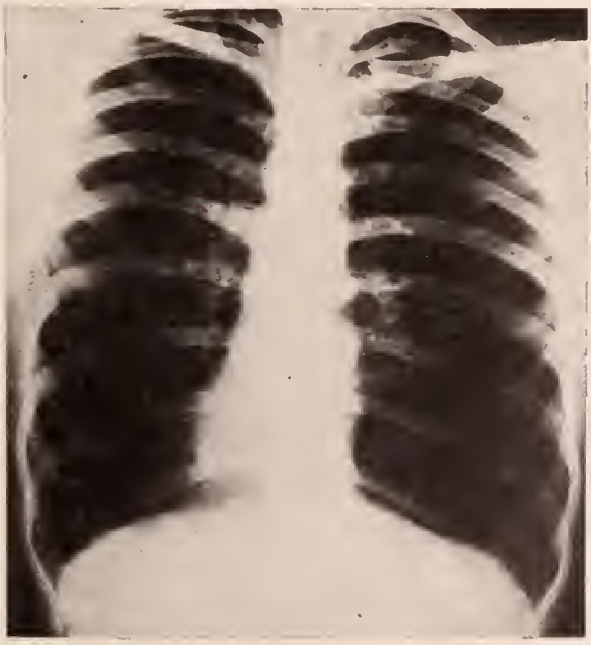

Fig. 1.—P-A view.

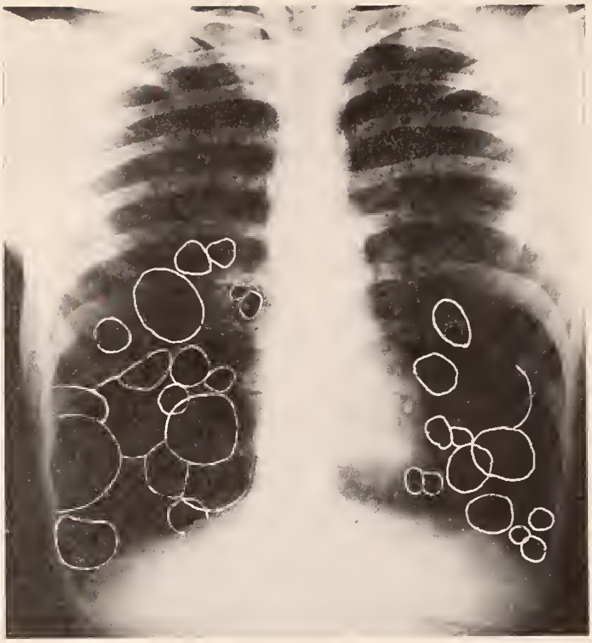

Fig. 2.—A-P view. Several of the cysts outlined with ink.

over both lungs, front as well as back; auscultation, expiratory murmur a little prolonged over the whole chest, no râles heard; voice sounds a little higher pitched over the right lower.

Heart: Dullness not increased; sounds clear and regular: pulse, 96; blood pressure, 120/100; no dilated veins; no cyanosis.

Abdomen: Flat, soft, symmetrical, no masses, no tenderness, no fluid.

Genito-urinary: Not remarkable; urine negative.

Extremities: No edema, no dilated veins, reflexes normal.

This clinical picture of empysema in a young man without previous history of asthma seemed most unusual; accordingly an x-ray film was taken with the following outcome:

"Stereoscopic chest films show a great many annular shadows in the lungs. The right lower lobe is filled with these shadows. All more or less spherical, overlapping and pressing upon one another; thin-walled, like the conglomerate shadow of a group of soap bubbles. They are also grouped around the right lung root, even in the upper lobe.

"There are a number in the left lobe; much of the lower left lobe is emphysematous, showing no lung detail. No doubt this region is filled by lesions with such thin walls that they hardly show on the films.

"This is a case of multiple, non-expansile, congenital cysts of the lungs. All connect freely with the bronchi, as none of them contain bronchial fluid or infected material.

"The upper lobes show very little involvement, and are relatively clear.

"A little secondary pleurisy over the bases."

Treatment.—The patient reported great relief of symptoms when taking small doses of ephedrin and amytal three times aday.

1127 Eleventh Street.
1027 Tenth Street.

Yet all experience is an arch where through
Gleams that untraveled world whose margin fades
Forever and forever when I move.
—Alfred Tennyson.

A PRACTICAL LAMP FOR THE MICROSCOPE

By H. H. Parsons, M.D.
Fort McClellan, Alabama

Artificial lighting for the microscope is in almost universal use, as it is constant, uniform in intensity, and generally available.

The box type of light is useful, but requires frequent resetting; and if one wishes to use the microscope at an angle, in order to be comfortable while working, the mirror has to be readjusted for any small change in position of the microscope. In order to obviate this frequent adjustment of the mirror, I devised the light about to be described, and for the past two years have used it with much satisfaction. The light is attached to the microscope stage and moves with it, so that no matter what position the microscope is in, the light always travels with it; consequently no adjustment of light or mirror other than the original setting is needed.

The device consists of a piece of aluminum plate, 2 by 4 inches in size, and thick enough to be rigid.

A hole, 1$\frac{1}{16}$ inch in diameter, is bored or cut in the front end, 1½ inch back, through which the base of a 25 or 40 watt, round electric-light bulb is inserted, when the socket is screwed onto the light base. A ten-foot extension cord is used.

The posterior end is shaved down to allow it to fit the curve of the Abbé condenser, and a screw hole made on each side for machine screws.

Two holes are bored in the undersurface of the microscope stage, to correspond with the holes in the aluminum plate, but are not allowed to perforate the upper surface. These holes are then threaded for the type of machine screws used. The corners of the aluminum plate are rounded off. It is advisable to insulate the brass base of the electric-light bulb from the aluminum hole, and a little adhesive tape will do this. The light should fit snugly in the hole, so that it will not wobble.

For student use, this lamp could be made readily detachable.

The accompanying diagram may be used as a template in making the device.

The Station Hospital.

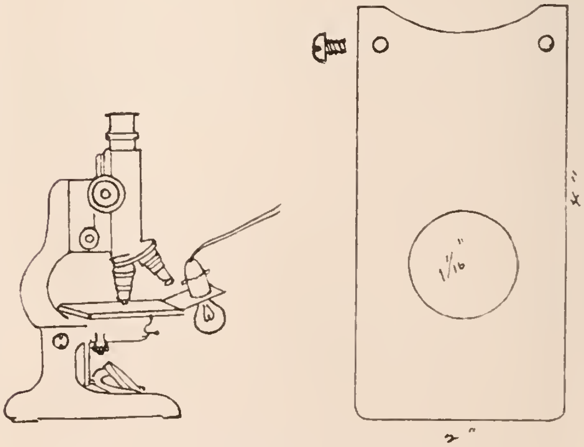

Fig. 1.—A practical lamp for the microscope.

NARCOLEPSY

By STANLEY R. TRUMAN, M.D.
Oakland

THE recently awakened interest in this uncommon disease has prompted the reporting of a rather typical case.

REPORT OF CASE

J. D., age 30, white male, was first seen January 8, 1935, complaining of an intense and uncontrollable desire to sleep, coming on during the day.

These attacks, noticed first at about eighteen or nineteen years of age, have gradually become more intense and more frequent; and during the year previous to the first examination the attacks were so severe that at times it was necessary for him to stop driving his car, or ploughing, or to cease from other activities at periods throughout the day and take a short nap. He was also forced to give up evening social engagements because, unless there was excitement, he would soon fall asleep. The attacks come on at any time during the day, but are more likely to occur shortly after heavy noon meals, or during warm weather, or after heavy labor, or during uninteresting, quiet situations or prosy conversations.

Each attack of narcolepsy consists of a gradually increasing desire to sleep, which he cannot fight off and which culminates in what appears to resemble in all respects normal sleep. Following from five minutes to an hour or more of sleep, the young man awakens in a "sleepy" condition, but is able to go about his business, rapidly regaining his alertness. When disturbed he feels as though aroused from a normal sleep of inadequate duration, and is always cross and annoyed. He does not seem to have any disturbance of nocturnal slumber, sleeping deeply and usually from eight to nine hours. Loss of nocturnal sleep apparently increases the tendency to diurnal sleep. The patient also complained of occasional spells of weakness, but suggested no connection between these and the attacks of sleepiness. These spells of weakness (cataplexy) manifest themselves in two ways. Both are precipitated by some intense emotional response such as laughter, excitement, or anger. The first consists of an absolute inability to move. For instance, after seeing a very funny moving picture he was absolutely unable to move a muscle of his body. On this and similar occasions he has been shaken by a friend who, used to having him fall asleep, has thought him asleep. This stimulus is sufficient to recall his muscle power instantaneously. He describes the feeling as being "weak as a rag for a minute."

The other manifestation of cataplexy consists of sudden transient spells of weakness, so brief that he has never fallen. These occur during activity of some sort, such as walking, and are brought on usually by excitement, such as seeing a child falling off a fence. In this particular instance (typical of others), with his first step, on running to catch her, "his knees failed him and he almost fell, but he caught himself on the next step." He is unable to recall the age when these attacks first appeared.

The family history is negative, except that his father has always fallen asleep very readily, following meals as well as nocturnally.

He was born and has always resided in California, is actively engaged in farming, has been graduated from a university where he made a good scholastic record and showed a normal, social reaction. In childhood he had measles, mumps, whooping-cough, and chicken-pox. In 1918, at the age of fourteen, he had influenza, which apparently had no relation to the attacks of narcolepsy. He denies any venereal infection, and his blood Wassermann reaction was negative in 1925.

In 1927 and 1928 he was in automobile accidents, but in neither case was he responsible for the accident. He received head injuries, and was unconscious for a few minutes on both occasions; in the first accident there was bleeding from the right ear, and a 10 per cent reduction in hearing has resulted. These injuries did not seem to alter the course or severity of the symptoms of narcolepsy in any way.

Physical examination revealed a well-developed and nourished white male of thirty years, six feet in height, weighing 178 pounds. There were no pathologic findings, except that tendon reflexes could be obtained only on reinforcement.

The laboratory examinations showed a normal urine, hemoglobin 17 grams, and red blood cell count of 5,580,000. The white blood and differential counts were normal. The sedimentation time was over three hours, and the Kahn blood test was negative. The basal metabolic rate was plus 16.

On the basis of this typical history and negative findings, a diagnosis of narcolepsy with cataplexy was made and, following the suggestion of Doyle and Daniels,[1] the patient was given ephedrin sulphate, grain three-eighths, at 7 a. m., noon, and 4 p. m. He stated that he obtained a prompt relief of his symptoms, but that he felt nervous after the four o'clock dose; so this was discontinued after one week. For the next month he took the ephedrin regularly and felt greatly relieved, and occasionally he enjoyed an afternoon nap, but was free of the uncontrollable desire to sleep.

He was not seen again for two and one-half months, during which time he took the ephedrin sporadically. He has been able to fight off attacks of sleep while engaged in any normal activity, but if he lies down he promptly falls asleep.

Following this treatment, he took no ephedrin for one month. There has been no relapse, and he has not had to stop driving his car since first starting ephedrin. He has been able to resume evening social engagements, with the exception of bridge, "which bores him so that he cannot stay awake."

In spite of the improvement in the narcoleptic attacks, there seems to have been no change in the cataplectic phenomena.

COMMENT

This patient presents in typical form the two major manifestations of narcolepsy, the predominating symptom being the occurrence of diurnal naps as a response to an overwhelming desire to sleep, occurring after adequate sleep and rest, several times during the day. The other symptom is cataplexy, which consists of spells of weakness involving a part or the whole of the body. Frequently, as in this patient, the person does not make any connection between the two complaints, and the onset of one may precede the other by a period of months to years.

The etiology of narcolepsy is undetermined, and this patient is typical of many in the absence of any extraordinary findings. Often an interesting family history of abnormal drowsiness or actual attacks of narcolepsy has been obtained. The father of this patient shows abnormal drowsiness.

Of the other diseases showing abnormal drowsiness, syphilis, brain tumor, cerebral arteriosclerosis, hypopituitarism, diabetes mellitus, obesity, polycythemia, malnutrition, and others, this patient evidences none, except a slight increase in the blood count, and this is not of sufficient magnitude to be grouped in the class of polycythemia.

A certain number of cases of narcolepsy have followed encephalitis, and this has led some authors to consider the two conditions as related. This patient had influenza in 1918 and from the history the attack seemed typical. There is no evidence that this might have been encephalitis, and following this attack of influenza there was a period of four to five years before the symptoms of narcolepsy appeared.

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[1] Doyle, J. B., and Daniels, L. D.: Symptomatic Treatment for Narcolepsy, J. A. M. A., 96:1370-1372 (April 25), 1935.

Patients have responded to a variety of treatments: withdrawal of spinal fluid, intrathecal introduction of air, irradiation of the hypothalamic region, psychoanalysis, and suggestion. Prior to the introduction of ephedrin sulphate, symptomatic treatment was neither satisfactory nor consistent. This drug has produced the most satisfactory results in treatment yet obtained. Some obtain prompt and apparently lasting relief, others slight or transient; but most are apparently pleased with the results obtained.

Usually the response to ephedrin affects the cataplectic tendency more than the drowsiness, but in the patient here reported the effect was just the opposite. What part suggestion has to play in this and responses to other types of treatment is hard to evaluate. However, suggestion is certainly a potent influence on these patients, and the failure of the cataplectic phenomena to respond may be due to the fact that a successful attempt was made to avoid the suggestion that the cataplexy and drowsiness were related.

SUMMARY

A typical case of narcolepsy is presented showing both drowsiness and cataplexy. The patient made a satisfactory response to treatment with ephedrin sulphate.

1904 Franklin Street.

AMEBIASIS: ITS DIAGNOSIS BY THE GENERAL PRACTITIONER

By J. F. Doughty, M.D.
Tracy

In view of the fact that from five to ten per cent of the population in California have amebiasis, it is imperative that the general practitioner be qualified to diagnose and treat this disease.

The impression has been created that such diagnosis and treatment is a highly technical and difficult procedure, which can be accomplished by only a few men in the metropolitan areas. This assumption is not warranted by the facts. Amebiasis should be suspected in the patient who presents a number of vague symptoms, usually involving the gastro-intestinal and nervous systems, and apparently without organic basis.

REPORT OF CASE

The following case history of Mr. Mc., age forty-seven, is illustrative: Six years ago he had so-called "intestinal flu," with diarrhea and abdominal distress. Since that time he has not felt very well, but has been able to work. His complaints when first observed by me, April 27, 1935, were: "Gas in abdomen, uneasiness or turmoil of intestines, sensitive belly, incomplete satisfaction following bowel movement, two mucus stools daily, rectal itching, dizziness, palpitation, sweating of palms of hands, nervousness, irritability, inability to eat beans, sweet potatoes, melons, and spinach, because they cause abdominal discomfort and gas."

Diagnosis.—The diagnosis of amebiasis can only be made by the identification of E. histolytica in the stools. The detailed description of the appearance of this parasite and its differentiation from other amebae inhabiting the intestinal tract of man, may be learned from any good book on clinical laboratory methods.[1] An excellent chart for this purpose may be found in an article by Gradwohl in the *Journal of the American Medical Association,* Vol. 102, No. 1, page 66. The cystic forms are more characteristic and more easily differentiated from the other amebae, as they have only four nuclei, as contrasted with eight in E. coli.

In the fresh specimen the protoplasm of the vegetative and of the cystic forms is seen under the low power of the microscope as highly refractile, glistening, greenish-white, transparent, ovoid or spherical bodies. The cystic form is usually about twice (15 microns) the size of a red blood cell, and the vegetative form usually two to three times (20 to 40 microns) larger than a neutrophilic leukocyte. If one is fortunate, he may see the vegetative form actively pushing out pseudopodia or containing red blood corpuscles. Morphology must be studied by the high power or oil immersion lens. A smear of the specimen may be made on a microscopic slide, fixed in Schaudinn's fluid and stained with iron hemotoxylin. This method is certainly better for prolonged study and for the differential diagnosis of the various amebae.[2] Practically, it is a long procedure and not readily done by the general practitioner unless he just fixes the slide in the Schaudinn's fluid and sends it to a laboratory for diagnosis. Here let me sound a warning—not all laboratory workers can identify E. histolytica.

The examination of the fresh stool is the method which I prefer, because it can be done by every physician and, with sufficient practice, it is quite reliable. No bismuth or mineral oil should be given previous to the examination.

Procedure in Obtaining Specimen.—To obtain the proper specimen is most important. I usually examine the first stool without any preparation, having the patient pass the stool into a paper cup at the office. One should choose the soft part of the stool and get any mucus present. One or two loopsful from different parts of the stool, is mixed with a drop of warm physiologic saline on a warmed slide. The following morning the patient is given a drastic saline purge, not allowed to eat breakfast, and told to report to the office after passing the third stool. By this time most of the food is absent from the stool, and one may get mucus. Let me *emphasize* that in the mucus can be found the typical cysts. Sometimes the patient may pass just enough mucus to soil the toilet paper, but one can get an excellent specimen from it. This mucus is placed on a slide with the loop and, if too thick, a drop of physiologic saline is added; then it is covered with a cover glass and searched for refractile protoplasm as described above.

The diagnosis is made by finding the specific protozoa. I never do less than three stool examinations, and with this method more are seldom necessary to find the organism, if it is present.

231 West Eleventh Street.

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[1] Todd and Sanford: Clinical Diagnosis by Laboratory Methods, p. 454, Saunders.

[2] Magath, Thomas B.: The Laboratory Diagnosis of Amebiasis, J. A. M. A., Vol. 103, No. 16, p. 1218.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

DISORDERS OF SLEEP IN CHILDREN

I. ETIOLOGY AND TREATMENT

Oscar Reiss, M. D. (1930 Wilshire Boulevard, Los Angeles).—The causes of disturbances of sleep in children are multitudinous; and since in most instances the treatment of these disturbances consists in removal of the cause, one cannot well attempt a discussion of treatment without at least briefly reviewing etiologic factors. And inasmuch as the scope of this paper does not permit of an extensive treatise, I will not attempt to do much more than classify in outline the various factors causing sleeplessness in children.

1. *Constitutional Neuropathy.*—Under this heading may be grouped those infants and children who have great difficulty in relaxing while awake, who do not fall asleep easily, who toss around considerably after falling asleep, and who are easily aroused by even trivial environmental stimuli. They manifest a tendency to tetany, spasmophilia and rickets, and the accompanying calcium deficiency, and are easily thrown into convulsions.

The treatment for this group consists in active calcium therapy to the point of establishing the necessary balance. At the same time attention should be given to the establishment of an environment free from disturbing factors.

2. *Sleep Disturbances Accompanying Disease.* One might include in this category practically the entire list of diseases with which children become afflicted, since each one of them may produce interference with sleep. Painful conditions should be considered first. Otitis media, especially in infancy, may show no other symptoms than fever and disturbed sleep, restlessness and wakefulness being the result of earache, which the little one cannot localize. The sleep of infants is also commonly disturbed by the pain of colic and intestinal disturbances, by hunger, by teething, and also because of eczema or furunculosis. In older children, renal colic, rheumatic fever, and the cardiopathies are potent disturbers of sleep.

Respiratory difficulties, whether due to nasal obstruction with consequent mouth breathing, or to the dyspnea of asthma, or to bronchial irritation of pneumonia or whooping-cough, with frequent coughing spells, mitigate against undisturbed sleep.

The ushering in of nearly all of the infectious diseases of childhood is usually evidenced by disturbed sleep, as one of the initial symptoms.

For those conditions where pain is interfering with sleep, the removal of the cause of the pain or discomfort is of primary importance; the child so often falls asleep immediately following paracentesis of a bulging eardrum. Often narcotics are necessary, codein being very effective. In the management of any of the above-mentioned conditions, attention to the comfort of the patient is important and conducive to sleep. Tepid baths in febrile conditions, and antipyretics in prolonged fever are helpful. The barbiturates may be given freely, especially when there is considerable restlessness.

3. *Faulty Physical Hygiene.*—The character of environmental conditions conducive to sleep seems to be well-known to physicians and to many laymen; nevertheless, one observes so many infractions of the rules of hygiene that it may not be amiss to mention the most flagrant ones. Troubled sleep or failure to fall asleep may be due to uncomfortable clothing, tight clothing, too many clothes, too much covering, and pressure of safety-pins. It may be due to an overheated bedroom, or one that is too cold, or to the lack of quiet and darkness. Some infants with very sensitive skin cannot sleep in a soiled or wet diaper. Quite obviously, the treatment must be directed toward the education of the parents in rules of hygiene. Too much stress cannot be laid on the desirability of having each child in a room by itself (certainly in its own bed), the room to be well ventilated and dark when the child is put to sleep, his night clothes to be light and comfortable, and the bed covers to be light in weight and sufficient in amount to meet the varying climatic conditions.

4. *Faulty Mental Hygiene.*—Under this grouping we shall list various forms of faulty management of children, which tend to upset them mentally or emotionally to the point of interfering with restful sleep.

In infancy, faulty sleeping habits are easily established and difficult to overcome. They should never be allowed to develop. The most common faults are overanxiety on the part of the mother, which results in the baby being picked up constantly on his slightest outcry. Often a pacifier is introduced, either into the mouth in the form of a nipple, or as a comforting plaything like a favorite toy animal or doll or a little quilt. Or perchance there may be a grandmother or an old family nurse to rock the baby to sleep. The eventual breaking of these habits always means a period of great strain for the child, the family, and the doctor.

To insure normal, peaceful sleep for children beyond the stage of infancy requires a thoughtful viewpoint on the part of the parents, and an understanding of the nature of each individual child.

Unfortunately many parents are completely ignorant of the fact that the emotional experiences and mental perplexities that befall a child during the day may have an untoward effect upon its ability to fall into peaceful slumber. Overstimulation, as represented by a too ambitious school program, too many extracurricula activities (dancing, music lessons, etc.), premature and untimely participation in social affairs and pleasures of the adult, unsuitable movies and radio programs, are not conducive to restful sleep. Nor is unreasonable or unjust discipline, which is often imposed by a parent who has undergone some vexatious experience, and is "taking it out" on the child. The child of sensitive nature is especially upset by such treatment.

Emotional shocks, such as are often produced by fright or the witnessing of some gruesome spectacle, are often the basis for some of the more serious disorders of sleep, such as night terrors. Many other factors could be recounted, but those mentioned above should suffice to emphasize the damaging effect of mismanagement.

Treatment

Treatment for the relief of disturbances of sleep caused by faulty mental hygiene obviously must be directed at the parents, who are usually directly or indirectly responsible. The therapy is educational in nature. One must patiently and painstakingly point out how in each instance the particular form of mismanagement has been responsible for the problem that has arisen, and that its cure can be brought about, not by the administration of drugs, but only by the institution of a thoughtful and intelligent program for the child.

* * *

II. FATIGUE AS A CAUSE OF SLEEPLESSNESS

Henry E. Stafford, M.D. (242 Moss Avenue, Oakland).—Fatigue is the most common cause of a disturbed sleep pattern in childhood. It is well said that the tired child is the one who does not sleep; not the one who is getting too much rest. Sleeplessness and fatigue too often form a vicious cycle. The tired, irritable child with diminished appetite loses his ability to take advantage of an adequate amount of rest; insufficient sleep in turn results in fatigue. Superficially there would seem to be little difficulty in solving the problem by placing a child at rest for a sufficient length of time. Practically this is at best only a temporary expedient. Fatigue, as well as sleeplessness, is only a symptom. It is illogical to attempt the explanation of one symptom in terms of another. Until we have determined the cause of fatigue and corrected it, our problem remains unsolved. Consequently, any discussion of sleeplessness in childhood must be based upon an analysis of the underlying factors which produced fatigue.

A faulty sleep pattern may be established early in life through faulty habit formation. The growing infant needs regularity. The irregularity of, or variation in the length of rest period promptly becomes a habit, and the loss of much needed rest ultimately results in fatigue. In this way the first link in the vicious cycle may be welded in the first few months of life. When the child grows older, objections to the afternoon nap are invariably raised too early in every household. There is no way to make a child sleep, but no rapidly growing individual should be excused from a mid-afternoon rest until the age of five, and longer in some children who tire easily. Such insistence is not often easy, but it may mean the difference between an irritable, restless child, and the one who lives a well-ordered happy life. Closely allied with the tendency to early elimination of the nap time, is the postponement of bed time at night. The late hour of a father's homecoming is often responsible. His desire to see and play with the small offspring too often forms the necessary wedge for the delayed bed time. The one or more hours of needed rest are not made up in the morning; the time of arising for the child remains unchanged. Valuable rest is lost.

Selection of the place for sleep is as important as regularity. In an effort to obtain "fresh air," many infants are put to rest on a noisy porch or in a glaring garden. In either surrounding, complete relaxation is impossible. An airy, darkened room furnishes sufficient ventilation and tends to promote rest of necessary duration. Many children are allowed to play in the bed or pen in which they take their nap or sleep at night. Any infant whose routine of living is not yet established is easily confused. Consequently, when he is put down to rest in surroundings associated in his mind with play, confusion results. More often than not, activity, either physical or mental, continues until sheer exhaustion drives him to sleep, and he slumps into some unnatural position to be found later uncovered and chilled. By the same token toys should never be placed in bed with a child. Too many covers, soft mattresses sloping to a hollow in the center of the bed, and pillows of all sizes and shapes play their part in disturbing the rest of the small infant and the runabout child. Too commonly parents will finally confess that their child is taken to bed with some older member of the household. This usually occurs toward morning, and often begins quite innocently during an illness or following some unusual event in the home. But it need happen only once or twice, and the child automatically awakens in order to move into another bed. In the same way habitual thumb suckers or blanket twisters arouse for varying lengths of time to practice their individual habit. Such incidents of mismanaged routine may seem trivial and even ridiculous. However, they are means of interfering with satisfactory rest; and so lead to fatigue and ultimately to sleeplessness.

Infections play an equally major rôle in the production of fatigue. A child competently supervised is kept in bed following an acute infection until all signs of fatigue have disappeared. Less commonly is it realized that there may be a connection between a chronic focus of infection and disturbed rest. Diseased tonsils and adenoids, infected sinuses, the invasion of the urinary tract by colon bacilli, enlargement of the hilum lymph nodes, tubercular or nonspecific thickening of the lung parenchyma result in symptoms similar to those of overexertion. Consequently the control of such chronic infections transforms the whiny, overexcited, restless child into a quiet, contented individual with a normal sleep pattern. It is very difficult for many parents to realize that there may be a connection between infection and sleeplessness.

Associated with, and often combined with infection are allergic phenomena. Hypersensitiveness to any allergen may produce fatigue and, consequently, sleeplessness in one of two ways. First, the mechanical blocking of the upper respiratory passages by the boggy, swollen mucous membrane of allergic rhinitis may awaken a child because of the resultant difficulty in breathing. Secondly, some of the less evident phases of increased sensitivity as, for example, the abdominal allergies may produce a sufficient amount of discomfort to interfere with rest. Reactions bordering on the spectacular result in some children when an offending protein is removed from their diet, or an irritating inhalant is eliminated from their surroundings and disturbed rest is replaced by complete relaxation.

Certain tired, sleepless children are described as "nervous" by parents, teachers, and nurses. The term itself is inadequate and inaccurate, largely because it connotes an inability of understanding and control. In reality the whiny, incorrigible child, given to frequent tantrums, has as a physical basis a tired central nervous system from which originate incoördinated stimuli. Among the common and neglected causes of such fatigue are ocular refractive errors. It is a pertinent reason why every child should have a routine eye examination by a competent oculist at the beginning of school training. In no other way can any but the glaring errors in sight be discovered and corrected. The eradication of such defects tends to reduce fatigue, diminish overstimulation and, incidentally, sleeplessness.

Imbalance of the glands of internal secretion may play a part in the production of fatigue. Paramount among the better understood glandular conditions predisposing to fatigue is hyperthyroidism. It has become comparatively easy to diagnose the undernourished hyperactive individual with a high metabolic rate due to oversecretion of thyroid hormone. Many clinicians fail to realize that the same clinical picture, but with a low metabolic rate, is also found in hypothyroidism. Previous to the observations on skeletal development in relation to thyroid activity, it was impossible to differentiate between increased or diminished activity of the thyroid in children under the age of eight years. Aside from the difficulties incident to the actual tests, the normal standards of basal metabolic rates below this age are inaccurate. Undoubtedly, as we learn more concerning the interrelationships between other glands of internal secretion many of the problems now poorly understood will become clear-cut diagnoses.

Fatigue posture, exemplified by underdeveloped rhomboids, sway back, prominent abdomen and sagging head is usually effect rather than cause. Consequently, muscular training necessary to correct such posture is usually insufficient in itself to permanently diminish fatigue. Conversely, the elimination of the underlying factors of faulty posture without the training in proper muscular balance will leave the problem only half-solved.

To summarize: disturbed sleep is, as a rule, a symptom of fatigue which in turn is dependent on a variety of underlying causes. As such, sleeplessness becomes a real diagnostic problem. It cannot be solved by the simple expedient of placing the tired child at rest for a period of time. The solution only becomes clear following a complete history and physical examination fortified with indicated laboratory data. In no other way can the relative importance of chronic foci of infection, glandular imbalance, early habit formation, allergy and congenital somatic defects, such as optical refractive errors, be evaluated.

* * *

III. SLEEP DISTURBANCES IN CHILDREN

Guy L. Bliss, M. D. (1723 East Third Street, Long Beach).—Every child inherits his own individual sleep pattern. This pattern is disturbed, and then only temporarily, by strong sensory impressions. In this discussion we are concerned only with the sleep disturbances of children who are both mentally and physically normal. During sleep the receptivity of the individual to sensory stimulation is greatly diminished, but motor activity continues in an apparently automatic manner. It is conceded that the depth of the sleep is inversely proportional to the amount of sleep movement; hence, any factor causing excessive movements during sleep leads to sleep disorder. While there are many factors causing sleep disorders in children, I wish to mention only four. In this we are offering nothing new. These simple, every-day factors which cause so much disturbance in our children at night are such common knowledge among pediatricians, we assume them to be common knowledge among the parents, and accordingly fail to emphasize them.

1. *Weather Temperatures on the Child.* — It matters not whether it is the high temperature of a torrid summer night, or a poorly ventilated room, or an artificially overheated room, or too many blankets on the bed, the end-results are the same. The child's motor activity is tremendously increased. He is continually thrashing and crawling out from under the bed covers, in spite of the many patented gadgets and paraphernalia to restrict him in the hot bed of discomfort. Parents are bound by the time-worn prejudices that a child might take cold if he is not covered heavily at night. The consensus of opinion, that no child gets sick or lowers its resistance by getting cold, is a fact which we often fail to make clear to the parents. The amount of heat and covers that any child needs is a very personal individual requirement. We should instruct the parents how to determine the amount of heat and covers best suited to the individual child.

2. *Heavy Meals.*—At night, within certain definite limits, it does not matter so much what kinds of foods are taken, but the size of the meal is very important. A heavy meal at night, in the majority of children, is prone to cause not only excessive

motor activity, but terrifying dreams, crying out in sleep, and a constant turning in bed. The habit of a heavy meal at noon and a light meal at night, just enough to meet the child's caloric requirements, will help to relieve one of the child's most common causes of sleep disorder.

3. *Bright Lights.* — How many times we are called to a home to see why Johnny will not take a nap. We find him in bed, in a room with a south or west exposure, with the window shades up and the curtains drawn aside to let in all the sun and light possible. The mother realizes the importance of sun and is too literal and enthusiastic in her attempt to give her boy both sunlight and a nap at the same time. A darkened room will give Johnny an autosuggestion of night, and he easily falls into a refreshing slumber.

4. *Noise.*—It is so silly that it seems asinine to mention, but legion are the mothers who expect Johnny to take a nap in a room where the blatant rasping voice of an advertiser rents the air, or they expect him to sleep in a room on the side of the home where a street-car squeals and rumbles by every ten minutes.

The above mentioned factors are some of those causing disorders of sleep, and have been common knowledge among all clinicians for years. Now the laboratory has come to our assistance and corroborated our observations with an electric recording device, called a hypnograph. Dr. Glenville Giddings, with the hypnograph, has shown that some of the factors mentioned causing excessive motor movement during sleep are positive influences in causing disorders of sleep in normal children.

The function of the pediatrician in preventive medicine is that of a teacher. Our problem is to overcome the ignorances, prejudices and superstitions of the average parent, and to convey to them practical ideas couched in sufficiently common horse sense to be within the mental grasp of all.

Optometry: Corporate Practice of Optometry Illegal in Arizona; Injunction to Restrain Practice.—The Funk Jewelry Company, a corporation, employed a licensed optometrist to examine eyes and to prescribe glasses. The state of Arizona, on the relation of the attorney general, instituted action to enjoin the corporation from practicing optometry. From an adverse judgment in the trial court, the corporation appealed to the Supreme Court of Arizona.

The optometry practice act, said the court, prescribes certain qualifications to be possessed by applicants for licenses to practice optometry. These qualifications necessarily exclude a corporation from practice. It cannot qualify. It does not possess the necessary moral and intellectual qualities. The corporation, therefore, when it employed a registered optometrist as a part of its business to examine eyes and to prescribe glasses, violated the optometry act. It was apparently contended, however, that even though the corporate practice of optometry was illegal, an injunction would not lie to restrain that practice. The optometry act, observed the court, prescribes no punishment for those who violate its provisions. Consequently, the ordinary criminal sanctions, such as fine and imprisonment, are not available to prevent continued violations of the act. Unless the writ of injunction is available, there is available no remedy to enforce the act. Furthermore, the court continued, while the civil process of injunction may not ordinarily be used to prohibit persons from committing a crime, where the crime is a public nuisance or affects the interests of the state, injunctions will lie. *State* v. *Smith* (Ariz.), 29 P. (2d) 718, 31 P. (2d) 102, 92 A. L. R. 168. The tendency is to grant injunctions to prevent unlicensed persons from practicing the professions. If the present action, said the court, had been brought by the state board of optometry or by members of the optometry profession, there would be no question of their right to maintain the action, in view of the trend of judicial opinion. The present action, however, was brought by the state, on the relation of the attorney general. The optometry act, continued the court, was passed for the general welfare of the people of the state. Its purpose is to protect the health of the people, and, while the state may not have any pecuniary interest in the enforcement of the act, it has a very much higher interest, and that is in the protection of the health and well being of its people. That being the case, it seemed to the court that the state, acting through the attorney general, could lawfully apply to the courts to exercise their equity powers to enjoin violations of the act.

The corporation apparently further contended that the state board of optometry had entered into some kind of an agreement with the licensed optometrist whereby the board agreed that the optometrist might render the services for which he was employed for a limited length of time. Such an agreement, the court said, would not have the effect of suspending the requirements of the optometry act. Furthermore, the agreement did not purport to authorize the corporation to practice optometry, and if it had, the agreement would have been void.

The judgment of the trial court, granting the injunction, was therefore affirmed. (*Funk Jewelry Co.* v. *State ex rel. La Prade* (Ariz.), 50 P. (2d) 945.)—*Medicolegal Abstract, Journal of the American Medical Association.*

Compensation of Physicians: Liability of Third Person for Medical Services.—The plaintiff, a physician, sued the defendant to obtain payment for medical services rendered a Negro employee of the defendant. The Negro, suffering from a gun-shot wound, was taken to a hospital owned and operated by the plaintiff. Immediately thereafter the defendant came to the hospital and, according to the plaintiff, said: "If you will go ahead and take care of the case, I will pay the bill." The testimony of several witnesses tended to corroborate the plaintiff. The defendant, however, denied that he had made the promise just noted and, from a judgment for the plaintiff, he appealed to the Supreme Court of Oklahoma.

The Supreme Court, however, believed that the evidence reasonably tended to support the verdict of the jury. In *May* v. *Roberts*, 28 Okla. 619, 115 P. 771, relied on by the court in the present case, the plaintiff, a physician, brought suit for services rendered the wife of the defendant's tenant. The defendant had requested the physician to visit the tenant's wife and told him that he would see that the bill was paid. Such evidence was held to be competent and material and to establish a primary liability not within the statute of frauds. Finding no error in the record in the present case, the Supreme Court affirmed the judgment in favor of the physician. (*Gloeckler* v. *Weedn* (Okla.), 50 P. (2d) 634.)—*Medicolegal Abstract, Journal of the American Medical Association.*

Workmen's Compensation Acts: Death from Sunstroke.—Death from exposure to the elements, including the heat of the summer and the cold of the winter, said the Supreme Court of Iowa, is not compensable if the hazard is the same to which the general public is exposed. For compensation to be recoverable for death from sunstroke, the deceased must have been subjected to a greater hazard from heat than that to which the public generally in that locality was subjected. This distinction is recognized by all the authorities. Compensation was denied in this case. (*Wax* v. *Des Moines Asphalt Paving Corporation* (Iowa), 263 N. W. 333.)—*Medicolegal Abstract, Journal of the American Medical Association.*

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section (Adv. pages 2, 4 and 6).

CALIFORNIA MEDICAL ASSOCIATION

EDWARD M. PALLETTE	President
HOWARD MORROW	President-Elect
FREDERICK C. WARNSHUIS	Secretary-Treasurer

1936 ANNUAL SESSION: CORONADO
MAY 25-29, 1936

PROCEEDINGS OF THE FIRST GENERAL MEETING

Monday Morning, May 25, 1936

President Peers: Ladies and Gentlemen, Members of the California Medical Association and of the Woman's Auxiliary: As president of the California Medical Association, it is my official duty and pleasure to call to order the first general session of the sixty-fifth annual convention.

At this time it gives me pleasure to present Dr. Benjamin F. Eager, president of the San Diego County Medical Society, who will give the address of welcome on behalf of the San Diego County Medical Society, our host on this occasion. Ladies and gentlemen, Doctor Eager. (Applause.)

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Doctor Eager: President Peers, Distinguished Guests, Officers and Fellow Members of the California Medical Association: It is the pleasure of the San Diego County Medical Society to be host to this convention. Many committees have worked for many months in order that your splendid program may go through with a maximum of efficiency and a minimum of inconvenience. Our distinguished guest speakers, together with those who make up the rest of the program, give assurance of rare pleasure and profit to all those attending, the only difficulty being that we are unable to listen to two papers of particular interest at the same time. This year, more than ever before, all of our component societies are looking forward with especial interest to the work of the House of Delegates and of the Council in handling certain difficult problems, some of which are more or less peculiar to California. Doctor Shoulder of Tennessee, Assistant Speaker of the House of Delegates of the American Medical Association, spoke ably and exhaustively at the Minnesota state meeting early this month, with the sole purpose of academically instructing the members on the evils of state medicine. We of California are faced with more immediate and more concrete needs for action. Our local society has already voted for coöperation with the state in the matter of hospital insurance, and, of course, may be counted upon for a share in the handling of the campaign against the antivivisection initiative, which is already on the ballot, and the increasingly difficult county hospital problems, and the basic science law, which is coming up in 1937. In this connection, I might say that several of us had the pleasure of meeting our editor, Doctor Kress, here some months ago, and we nearly wore him out with questions and arguments on this matter. . . .

And now for the varied and often strange interludes of relaxation and entertainment. We of San Diego can offer such a variety that we can say with the old lady who kissed the cow, "Every fellow to his notion." Besides golfing and bathing, which we had better say comes every day—yesterday and tomorrow—we have a distinctive sport, sword-fishing, which is fully equal to the famous tarpon fishing of Florida, and, incidentally, for the benefit of the fishermen, the game yellowtail is running beautifully right at the present time. Of course, you will want to visit the Hall of Medical Sciences and the other attractions at our Exposition, even though Sally Rand has been replaced by Ben Bernie. And for one of our outstanding attractions we have our military units: the Naval Hospital, which is probably the finest in the country; the Naval Training Station; the Marine Base; Fort Rosecrans; and the flying units of North Island. All of these can best be explained to you by Captain Porter, who is Commanding Officer here at the Naval Hospital.

The Mayor of San Diego yesterday tendered his best wishes to all the visiting doctors and, in contradistinction to Winchell, the keys to the city. The Chief of Police of Coronado, in a little heart-to-heart talk which we started, also tendered his very best coöperation and the best keys he had. Thank you. (Applause.)

The President: Thank you, Doctor Eager. I notice that Doctor Eager, like myself, is also a student of Rabelais, because those who have read Rabelais remember how he mentioned the old lady who kissed the cow. I am going to refer to François Rabelais a little later myself.

The medical profession has always been proud of the service that has been rendered by members affiliated with the Army and the Navy of the United States, and the United States Public Health Service. These members, in their respective services, have made many contributions to the advancement of scientific medicine and, in recognition of this service, the California Medical Association deems it a privilege to present the Commanding Officer, F. V. Porter, of the Eleventh Naval District. Ladies and Gentlemen, Captain Porter. (Applause.)

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Captain Porter: Mr. President and Members of the California State Medical Society, Distinguished Guests: I think your president slightly misled you as to my position. I am simply Commanding Officer of the Naval Hospital, which is only one of quite a few units in the San Diego vicinity. You see, there are the training station, the air station, the receiving station, and various other units. Although it is commonplace and quite superfluous to say so, I feel very highly honored to be invited to this platform, and I want to express my thanks to your president, speaking not only for myself, but for the Navy and the Medical Corps, for his courtesy in extending to us the privilege of attending your meetings. San Diego is very largely a navy town, so I think it is not improper that I welcome to San Diego, on behalf of the Navy, the out-of-town members of your society. More particularly on behalf of the Commandant of this district, I want to extend a cordial welcome to them to visit the naval establishments here, and to all of you I extend a most cordial invitation to visit our Navy's one-thousand-bed hospital in San Diego. Both here and in the San Diego, San Pedro, and Long Beach areas, the Navy medical groups and the local medical groups make many contacts with each other, and I am happy to be able to say that these contacts are all friendly and cordial. Each group has much to offer the other, with mutual profit and satisfaction. However diverse may be our lives and our ways of livelihood, we have at least one great aim in common, the mission of caring for the sick and equipping ourselves; that is, equipping our minds, our hands, our stock of tools, and our materials, to carry out this mission always better than we have ever done in the past. We in the Navy Medical Corps in San Diego esteem it a distinct privilege and opportunity to be able to attend the local medical society meetings and clinics in this area. We are happy to have local men attend our surgical and other clinics, and our weekly staff conferences at the hospital, and we would be more pleased if this exchange of meetings, attendance, consultation and visits, all of which amount to exchange of ideas, could become much more extensive than it has been in the past. The Naval Hospital here is the largest hospital this side of Los Angeles. It always has on hand a wealth of clinical material, often including diseases contracted in tropical and distant places, diseases seldom seen by civilian physicians. If some of you can find time to go with us on our ward rounds or into our work rooms, we may be able to show you some things, and I am certain that you could tell and show us many things. Again I want to give your society the Navy's welcome to San Diego, and say that we are glad that your meeting this year is close enough to San Diego so that we of the Navy Medical Corps may meet with and make some acquaintance with you. (Applause.)

The President: Thank you very much, Captain Porter, for your cordial welcome.

Doctor Warnshuis, secretary of the California Medical Association, has a few announcements to make.

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The Secretary: Mr. President, Distinguished Guests, Members of the California Medical Association and Their Friends: You are all experiencing the efficiency of the profession of San Diego in the splendid arrangements that they have made for our comfort and for the success of this meeting. Their efficiency has extended so far that they have used their president in making his welcoming address as a source of some of the announcements of the secretary in order to fill out the time that was allotted to him, so I will not take much time in making my announcements. Along late last fall the management of the San Diego Exposition, together with representatives of the San Diego County Medical Society, approached the officers and the Council of the California Medical Association, requesting them to assume the responsibility for a medical hall of science at San Diego. The San Diego County Medical Society, through a very efficient committee headed by Dr. Lyell Kinney, with Doctor Geistweit as secretary, has presented to the people of this nation (and I say "people of this nation" advisedly, because they are visiting us here) a most outstanding demonstration of what medical science has and holds for the public welfare. I am sure that I have not the words to express the appreciation that should be felt by every member of our Association for this educational program that is being conducted now at the Fair, and which will continue until the ninth day of September. As a result of their activity, we have had tendered to us the control, supervision and censorship of the Medical Hall of Sciences at the San Francisco Fair in 1939; and the San Francisco Chamber of Commerce did not ask me to make that announcement. So it is the very earnest desire of the Council and the officers of this Association, and also the members of the San Diego County Medical Society, that every one of our members take the opportunity to go to this Exposition, and especially to see this medical exhibit in the Hall of Science.

The very efficient Captain and Commanding Officer of the Naval Hospital has also trespassed upon the secretary's announcements, and therefore I will not have to say very much in supplementing what he has extended to you—the most cordial invitation of the Navy Department, especially the Navy Medical Department; and may I say, also, that Surgeon-General Rossiter supplemented that invitation at Kansas City two weeks ago.

The president's dinner will be held tomorrow evening in the main dining room at 7:15 p. m. There will be a dinner that will last probably until about nine o'clock, when we will adjourn to this room, where we will attempt to entertain you for one hour upon this platform with some very talented representatives of the San Diego County Medical Society, and after their entertainment the floor will be cleared and those who wish to do so may dance.

The House of Delegates convenes in this room at 7:30 this evening, and the Council meets at two o'clock this afternoon.

I am sure that this should serve as a very adequate and fitting introduction to the wonderful address that you are now going to hear from your president, Doctor Peers. Now it is my official duty to present to you the president of the California Medical Association, who will read his presidential address.

(President Peers read his presidential address.*)

At its conclusion the audience stood and applauded.

* * *

The President: Thank you very much. This is just another evidence of how kind everybody has been to me through the whole year.

It is now my duty and pleasure to introduce one of our guest speakers from without the state. As a tuberculosis worker for many years, it is a very great pleasure to me to have on our program this morning, and to be able to introduce, one of not only national but international reputation in tuberculosis work. Doctor Singer is going to speak to us this morning on "Newer Methods in the Treatment of Pulmonary Tuberculosis." It is a pleasure to introduce Jacob J. Singer, M. D., associate professor of clinical medicine, Washington University School of Medicine, St. Louis. (Applause.)

* * *

(Doctor Singer read a paper on "Newer Methods in the Treatment of Pulmonary Tuberculosis." †)

The President: Thank you, Doctor Singer. Those of you who do not know him as so many of us on the Coast do, understand why I spoke of him as a distinguished student of tuberculosis, nationally and internationally known. I think that was a wonderful address and we appreciate it very much. Doctor Singer has said that if anyone wishes to come up and talk with him after this session is concluded, he will be happy to have them do so.

The meeting was adjourned by the president.

HOUSE OF DELEGATES MINUTES

Sixty-Fifth Annual Session—California Medical Association

*Minutes** of the meetings of May 25 and 27, 1936: Hotel del Coronado, Coronado, California.*

FIRST MEETING

Monday Evening, May 25, 1936

The first meeting of the House of Delegates of the California Medical Association was convened in the Ballroom, Hotel del Coronado, Coronado, California, on Monday, May 25, 1936, at 8:15 p. m., with the Speaker, William W. Roblee of Riverside presiding.

The Speaker: The House will be in order. The Speaker has appointed a Credentials Committee consisting of Doctors Askey, Dexter Ball, and Kelly Canelo. We will hear the preliminary report of that committee at this time.

Dr. Askey: Mr. Speaker, the report of the Credentials Committee is not complete at this time. There are ninety-nine members registered so far, which constitute a quorum.

The Speaker: If there are no objections, the preliminary report of the Credentials Committee will be accepted and the delegates will be seated. The Speaker hears no objections. It is so ordered. Mr. Secretary, call the roll.

The Secretary: Mr. Speaker, I hold in my hand the signed attendance slips of ninety-nine accredited delegates. I suggest that these attendance slips be considered the roll call of the House for its first session.

The Speaker: If there are no objections, that order will hold. A quorum of accredited delegates being present, the provisions of the Constitution and By-laws having been complied with, I now declare the House duly constituted and open for business.

Appointment of Reference Committees

Reference Committee No. 1 on "Reports of Officers and Committees, Both Regular and Special"—Eric Larson (chairman), Alfred Phillips, and Nathan Hale.

Reference Committee No. 2 on "New and Miscellaneous Business and Resolutions"—Daniel Crosby (chairman), Morton Gibbons, Sr., and Ben O. Adams.

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* The address of President Robert Peers of Colfax was printed in the June issue of California and Western Medicine, page 464.

† Doctor Singer's paper will appear in a later issue of California and Western Medicine.

** Original minutes as taken by stenographers are on file in the central office of the Association. Because of lack of space in the official journal, some portions are not here printed.

Will the chairmen of the committees decide upon a place and time of meeting so that it can be announced a little later in the proceedings?

Introduction of President Peers

The Speaker: I think if it were necessary for us to characterize in one phrase the administration that is just closing, we could say that it has been a friendly one. President Peers has gone about the state to the farthest corners, radiating good cheer and friendship wherever he went. His wife characterized him one time in my presence in a very apt way. She said, "My husband never takes the trouble to dislike any man." I think that is true. (Applause.) Doctor Peers' friendly contacts over this state this year have meant much to organized medicine. Not infrequently he speaks of saying things "to the boys." We are all his boys. President Peers, you may now have a few minutes to talk informally to your boys in a way that you could not do in the formal meeting this morning. Gentlemen of the House, your President. (Applause.)

Remarks by President Robert A. Peers

The President: Mr. Speaker and Members of the House: I hope the speaker will allow me to talk to my girls as well as to my boys. There are quite a few of the girls here and some of them are delegates. I did not expect to talk to you tonight. I thought this morning that I had already sung my "swan song." So all I want to say to you is that I have had a wonderful time. I told you that before, and I tell it to you again. I have had a wonderful time because I have had such perfect coöperation from every member of the Council, every one of the general officers, from the presidents, secretaries and other officers of the county societies, and from the men and women of the county societies. I have had a splendid time because of this coöperation, but I will feel a sense of relief, of course, when Wednesday night rolls around and I can turn the burden over onto Eddie Pallette's shoulders. There will be a certain relief about that, but you know I am going to miss a lot of trips. I have had a wonderful time because you men and women throughout the state have made it so for me, and I thank you very much. (Applause.)

The Speaker: Mrs. Peers told me to tell you that she was having a nice sign painted saying, "Welcome home."

A little later in the evening, opportunity will be afforded those who wish to introduce resolutions or amendments to the Constitution and By-laws. If you will have those ready, it will save some time and confusion.

The next item on the docket is the report of the Council. The chair recognizes Dr. T. Henshaw Kelly, chairman of the Council. (Applause.)

Report of the Council

Doctor Kelly: To the Speaker and House of Delegates, Greetings. There is hereby submitted to you, and through your members to the membership at large, this annual report of the Council.

1. *Foreword*—Inasmuch as all the minutes of the Council meetings have been published from time to time during the year and constitute part of this report, the Council limits this annual report to general summarization, and certain comments and recommendations that it feels should receive special consideration by this House of Delegates.

2. *Finances.*—The certified order of the Association's financial transactions and resources is submitted as Appendix A to this report. Your Council directs attention to an operating loss for the year of $26,968.20. This loss in operations and resources resulted from very implicit and unlimited action by, and instructions from the House of Delegates, and arose from the following extraordinary expenditures: The Committee of Five, $17,278.16; the Committee of Six, which dealt with the matter of the Senate Bill 454 in the 1935 Legislature, $4,736.19; and expenses connected with legislation, $10,921.10. The Council calls attention to the fact that the resources of the Association would have been further depleted to the extent of $12,641.98 had it not been for actual savings made in administrative costs and authorized expenditures for other activities of the Association, by the careful supervision and the experienced advice and work of the secretary-treasurer. This amount was actually saved by him through studied purchasing, extra work, and careful attention to detail in the work of the Association in 1935. Delegates are informed that a poll of the members overwhelmingly favored an expenditure of approximately $35,000 to obtain the enactment of a qualifying certificate law by iniative legislation. This poll was taken before the decision of the Supreme Court upholding the law passed by the 1935 Legislature, requiring every voter to reregister in 1936. After this decision, expert opinion was against risking the initative this year, because of the limited time left to obtain the signatures and the danger of having too many of those obtained declared illegal. Therefore, the Council is preparing for the 1938 general election and the committee on the basic science act, or the qualifying certificate act, will further report to the House of Delegates through its chairman, Dr. George H. Kress. From information transmitted by the Committee on Public Policy and Legislation, it is anticipated that legislation in the interest of public welfare, and of interest to all members will be sought during the coming election and in the session of the 1937 Legislature. Additional funds will be necessary to oppose untoward legislation. The House of Delegates is further advised that pending court procedures in matters that concern the profession and its future will demand representation and added expense. In view of these pending activities and the expenses that they incur, the Council recommends that careful and thoughtful consideration be given to devising means to meet these problems. The Council requests that the delegates determine whether funds be obtained by increasing the annual membership dues, or by the levying of a membership assessment. Your consideration should make it apparent to every member that an increase in income is imperative for the Association's solvency, as well as to enable it to function unhampered to the best interest of individual members and the future welfare of the profession of this state. Remembering that the dues are set annually by the House of Delegates, and that the Legislature meets in 1937 after the general election in November, 1936—at which time it is very likely that the county hospital initiative will be on the ballot—the Council recommends that the House of Delegates set the dues for 1937 at $15 per active member.

3. *Membership.*—The secretary's annual report records a total of 5,402 active members on January 1, 1936. It is estimated that this represents 83⅓ per cent of the qualified desirable physicians and surgeons of the state. This conclusively establishes that our Association is the representative body of the licensed physicians and surgeons of the state, and, as such, that it is the mouthpiece of the profession, authorized to speak for it in matters that concern its interest. There are, it is estimated, about one thousand physicians eligible for membership not now affiliated. The Council urges that every county society make a determined attempt to obtain the affiliation of all eligible and desirable physicians.

4. *Council Meetings.*—During the year the Council has held six meetings. Its minutes have been published in full. The Executive Committee has held three meetings and its minutes have also been published. The Council also initiated a County Secretaries' Conference. The full report of that conference, which will now be an annual function, was published in the March issue of California and Western Medicine. Individual reports of councilors will be found in the Pre-Convention Bulletin. They represent a more intimate insight into the activities of each councilor district. In the opinion of the Council, there is an increasing interest being manifested by every constituent unit. This may be construed as indicative of approval of our Association's program and policies. Generous credit is given to President Peers, President-elect Pallette, and the secretary for their time and labor in visiting every county society in presenting our policies and activities to these units, many of which had never been visited by a general officer of the Association. There is much evidence that members perceive in greater degree the value of membership, and what can be obtained by unity of purpose and action.

5. *Appeals.* The decision of one component county society and the Council was reversed by the Judicial Council, the American Medical Association, largely because of differences in procedure contained in the Constitution

and By-laws of the component county society and the California Medical Association. The decision of the Judicial Council was published in CALIFORNIA AND WESTERN MEDICINE. The Council has received and heard appeals of certain members of two other component county societies from action by these societies, involving the membership of fourteen members. The Council wishes again to emphasize the necessity of prescribed procedures when disciplinary action is taken by a county society, and stresses the advisability of consultation with a district councilor and the secretary of the California Medical Association by the officers of the county medical society faced with disciplinary action.

6. *Malpractice Insurance.*—The Standing Committee on Medical Defense has spent a great amount of time and effort in the study of the conditions existing in the field of malpractice insurance in California, and will render a report to this House of Delegates tonight. The experience of many members has been such as to compel the Standing Committee and the Council to consider the formation of our own insurance carrier, and much thought and study have been given to this matter to be ready, if the situation becomes intolerable, to set up our own malpractice insurance company. The California Medical Association has had previous experience in this field, because from 1909 to 1923 medical legal defense was offered as a part of the benefits of membership in the Association. When this service was discontinued in 1923, a number of members, realizing the value of the experience gained in these years by the legal staff throughout the state that did this work, organized a small association known as the Medical Society of the State of California, which provided its members with legal defense in any malpractice claim or suit. This society has been and is functioning steadily and quite satisfactorily to its members who have needed its service. The legal service that it gives represents only the physician involved and does not divide its allegiance between the physician and his insurance carrier, whose interests are frequently not identical. A very close coöperation exists today between this society and the malpractice insurance carriers. Its greatest total membership was about 900 and this, because of apathy, the depression, and the failure of many men to appreciate the value of legal counsel serving only their interests in malpractice suits, was reduced to 404 by January 1, 1936. For the information of the members of this House, the officers and members of the Medical Society of the State of California are and must be selected from the membership of the California Medical Association, although the society is not a part of the Association. Membership in it now costs $10 a year, and is contingent upon membership in the California Medical Association and the possession of a valid policy for not less than $5,000 in an approved malpractice insurance carrier. A brief statement of its activities during its existence follows: From 1923 to 1935, forty-nine claims arising against members were disposed of, and 119 suits brought against members were disposed of, with only one case lost. The others were either dismissed, won or settled with the consent of the physician and the insurance carrier involved. On January 1, 1936, there were still twenty cases and claims pending before the Society. Following the report of this Standing Committee on Medical Defense, the House may give expression to its wishes in the matter, and the Council recommends that the House give authorization to the Council to take positive action when, in the Council's opinion, the situation demands it.

7. *Annual Sessions.* The increasing attendance at our annual sessions, which is most gratifying, presents an important problem to the Council in selecting places with ample hotel and auditorium facilities. This fact is perceptible at this meeting. It is an obligation of the Association to complete arrangements so that it is possible for every member who desires to attend to have suitable hotel accommodations, and that auditoriums are of such size as will permit his attendance at section and general meetings. The Council, following a communication from the Committee on Scientific Work, appointed a special committee, consisting of Doctors Morton R. Gibbons, Lowell S. Goin, Lemuel P. Adams, John C. Ruddock, and Fred Gundrum, to survey our scientific sections, their status and possible amalgamation. The report of this committee is presented as Appendix B. Following is the report of the Committee on Scientific Sections, the executive group. This committee was appointed in accordance with the request of the Committee on Scientific Work and section officers, to devise a plan or plans for submission to this House of Delegates, by which the multiplicity of scientific sections of meetings at the annual convention would be limited, and at the same time more members would be enabled to hear more papers and the general practitioner would have the opportunity to follow a more diversified program than at present. A plan was presented to the Council at its meeting on May 24, and it was realized that no plan could be adopted by the House of Delegates with the hope of general approval unless the sections themselves had been consulted, and had had opportunity to study the problem. Accordingly, your committee asks for time to make adequate canvass of the sections, and suggests that the Council be authorized to make the necessary changes in system when, and if, a satisfactory plan is devised. Members of various sections are requested to give this matter their consideration, and to make recommendations to the Council of plans they think best.

8. *Amendments.*—In order that your Council may properly advance the expanding functions of the Association and insure efficiency, the Council recommends the adoption of the following amendment to the By-laws:

Resolved, That Section 20 (a) of Chapter V of the By-laws of this Association be, and it is hereby amended by adding after the phrase, 'the Committee on Industrial Practice and the Cancer Commission," and before the phrase, "and the president," contained in the first paragraph of said section, the following: "the Committee on Postgraduate Activities."

That is, to make the chairman of the Committee on Postgraduate Activities a member of the Committee on Public Relations.

In order that the experience gained by the retiring president during his two years of service as president-elect and president may be utilized to the fullest extent by the Council and the incoming officers, President Peers has recommended, and the Council heartily concurs, that the following amendments to the Constitution be adopted so that the retiring president shall serve upon the Council for one year. President Peers requests the Council to state that because this cannot be acted upon for one year, being a constitutional amendment, he makes this recommendation gracefully and guiltlessly. The amendments proposed are:

Resolved, That Section 1 of Article VII of the Constitution of this Association be, and it is hereby amended by inserting in the first paragraph thereof, after the words, "the President," the following: "the Past President"; and, be it further

Resolved, That Section 1 of Article X of the Constitution of this Association be, and it is hereby amended by inserting after the words, "a president," the following: "a past president"; and, be it further

Resolved, That Section 2 of said Article X of the Constitution of this Association, and the title thereto, be amended to read as follows: "Section 2. President-elect, When and How elected—Term of Office—Past President.—The House of Delegates at the regular annual session thereof shall elect the president-elect to serve until the adjournment of the final meeting of the House of Delegates at its next regular annual session. At the conclusion of the final meeting of the House of Delegates at its next regular annual session, such president-elect shall assume the office of president and serve as such for the term of one year thereafter or until his successor assumes office. At the expiration of his term of office, the president shall become the past president and serve as such for the term of one year thereafter or until his successor assumes office"; and, be it further

Resolved, That Section 4 of Article X of the Constitution of this Association be, and it is hereby amended by inserting in the first paragraph thereof after the word, "president," the following: "Past president."

I introduce these two sets of amendments for the Council. One can be acted upon Wednesday night. The one dealing with the past president has to stay on the table for a year, according to the provisions of the Constitution.

9. *County Hospitals.*—The persistent endeavors on the part of certain individuals and groups to secure authority to open county hospitals to all citizens regardless of their financial independence, constitute a grave situation and

problem. A special committee created at Yosemite by the House of Delegates, consisting of Doctors A. E. Anderson, Louis Packard and Earl Moody, will render a report upon this subject, based upon an enormous amount of work and devoted study by the committee. The Council recommends careful perusal of this report by every member. The Council further recommends that this matter be given preference and first consideration by this House and the Council, and that the committee be continued to work through the Council and the Committee on Public Policy and Legislation. The Supreme Court refused to grant a hearing on the decision of the Apellate Court upholding the Kern County decision closing county hospitals to nonindigent patients and thereby made this the existing law in California. Supervisors in many counties, the grange and other farm organizations, and some labor organizations, are circulating an initiative petition now that will in all probability be on the ballot in November of this year. The Council believes that this initiative contains the seeds of the most dangerous and fundamental changes in the practice of medicine ever presented to it, and urges that every facility be granted to oppose this initiative, and that every effort be put forth by physicians of California to prevent this proposed ruin of medical practice.

10. *Hospital Insurance.*—During the year, and following the passage of Assembly Bill 246 by the 1935 Legislature, there have been many discussions of the type of hospital service to be rendered by corporations formed under the provisions of this act. Consultations and meetings between the Committee on Public Relations and interested groups were held, and at the request of the Council, the Committee on Public Relations formulated standards for proposed plans necessary for their approval by the California Medical Association, referring always to the resolutions passed by the House of Delegates at its 1935 annual session, and dealing with proposed division of medical practice in the technical and professional fields. The Council, by resolution, requested the delegates to the American Medical Association to introduce the following resolution into the House of Delegates of that Association:

> WHEREAS, Certain organized lay groups in this country are endeavoring to arrange for the provision of diagnostic medical services along with, and as a part of hospital services; and
>
> WHEREAS, The provision of such diagnostic medical services will inevitably foster fundamental changes in the practice of medicine; and
>
> WHEREAS, Such changes in the practice of medicine may well result in deterioration of our present medical standards, and especially in deterioration of the quality of medical care furnished to hospital patients; now, therefore be it
>
> *Resolved,* That it is the official policy of the House of Delegates of the American Medical Association that it disapprove of the division of any branch of medicine of the technical and professional portions; and be it further
>
> *Resolved*, That copies of this resolution shall be brought to the attention of the American Hospital Association and its affiliated groups, to the end that existing arrangements permitting division in medical practice be terminated as soon as possible.

This resolution was introduced and the House of Delegates of the American Medical Association passed a resolution requiring all medical practice to be at all times under the immediate supervision of a doctor of medicine.

The Council recommends that this House reaffirm this policy which it expressed by resolution at Yosemite.

The Inter-coast Hospitalization Insurance Association was formed during the year from the Superior California Hospital Association, and is expanding rapidly. Satisfactory arrangements regarding the inclusion of case indemnities for roentgenological, clinical pathological services in the policies are apparently imminent.

The Alameda County Medical Association has been very active, and has raised, in conjunction with the associated hospitals, the necessary funds to form a corporation of a mutual type, which it was considering in 1934 and which served as a basis for the Council's recommendation at Riverside in that year, for a state-wide hospital insurance plan. The Council hopes that every assistance will be given this plan and its operation, and stresses the importance of the consideration by other county societies of a similar plan. The stabilization and control of these plans by the medical profession will do much to protect the future of medicine and will prove to the public that medicine is alive to the needs of the sick and not a blind adherent to old economic forms in a rapidly changing world.

Hall of Medical Science, San Diego Fair.—At the Pacific International Exposition there is a Hall of Medical Science, sponsored by the California Medical Association and the San Diego County Medical Society, which is admittedly one of the two best buildings at the Exposition. The quality of this exhibit and its development are due in great part to the efforts of the committee of the San Diego County Medical Society, consisting of Doctors Lyell C. Kinney, W. H. Geistweit and Maynard C. Hardy, aided by the Advisory Committee of this Association, consisting of Doctors Clarence G. Toland, E. M. Pallette, John C. Ruddock, William Roblee, C. O. Tanner, Robert Peers, Frederick C. Warnshuis, and Fred B. Clarke. These members deserve the highest praise, and their success has placed in the hands of the California Medical Association medical exhibits for the fair to be held in San Francisco in 1939.

As your interim governing body, the Council has sought to conform with the implied and recorded desires of this House. Opinions have been obtained from the membership by poll when considered advisable, and a studied effort has been made at all times to secure the greatest good for the entire Association. The Council extends its thanks to all members of the Association who have given so unselfishly of their time and effort. The election in the Fall, if the county hospital initiative is on the ballot, and the Legislature of 1937, to say nothing of changes and economic uncertainties in the practice of medicine, demand the earnest study of all physicians. The Council urges that every member of the California Medical Association use every means to familiarize himself with our problems and, when decisions have been made and policies fixed, to work shoulder to shoulder with his fellows as physicians and citizens, to the end that the fine things of medicine shall be preserved to us and to our successors.

Respectfully submitted,

THE COUNCIL.

By T. Henshaw Kelly, *Chairman.*

(Applause.)

THE SPEAKER: Thank you, Doctor Kelly. This report of the Council will be referred to Reference Committee No. 1. The next item on the docket is the report of the Trustees. Doctor Kelly again, chairman of the Board.

Report of the Trustees Of The California Medical Association

DOCTOR KELLY: This report is very short and sweet. It consists of the auditor's report of the Trustees, which is the holding company, as of December 15, 1935.

(The balance sheet was read by Doctor Kelly, who stated it was subject to the attendant comments, and should be read in connection therewith.)

INCOME AND EXPENSE ACCOUNT

INCOME:	
Interest on bonds	$1,426.34
Interest on savings accounts	543.77
Gain on the surrender of government bonds	83.12
Total income for year	$2,053.23
EXPENSE:	
Professional services	$ 125.00
Miscellaneous	22.07
Total expense for year	$ 147.07
Net profit for year	$1,906.00

On December 15, 1935, we held $25,000 in par value 4 per cent U. S. Treasury bonds, and $14,000 of 3¼ per cent Treasury bonds, making a total par value of $39,000. The indicated market value on that date was $42,179.47.

Respectfully submitted,

T. HENSHAW KELLY.

Reports of Officers and Committees

THE SPEAKER: The reports of the officers and standing committees and some of the special committees have been published in the Pre-Convention Bulletin. If there are no objections, these committee reports will be referred to the following reference committee. The report of the President, the President-Elect, the Speaker, the Secretary, the Treasurer, the Editor, the Legal Department, the Councilors, the Standing Committees, the Auditing Committee, the Cancer Commission, the Committee of Five, the Qualifying Certificate Law Committee, the San Diego Exposition Committee, the Committee on Scientific Exhibits, the Committee on Scientific Sections, the Committee on Health Insurance, that is the Committee of Six, the Committee on Tax-Supported Hospitals. These will all be referred to Reference Committee No. 1.

Doctor Kelly: If I may, I have a minority letter from one of the members of the Committee of Six which I think should be read. It was turned in too late to be included in the printed report of the committee. The minority report is by Dr. W. B. Coffey.

The Speaker: All right, Doctor Kelly. What is the supplementary report?

Doctor Kelly: Mr. Speaker, and Members of the House of Delegates: The tentative report of the Committee of Six, which, as you know, was a committee created by the House at its special meeting, to deal with the matter of health insurance in the 1935 Legislature, was sent out to the members of the committee with the request to read it and send in any questions they might have in order to correct the report before it was finally published. Through a series of circumstances, Doctor Coffey's letter dealing wtih his feelings in the matter of the report did not come in, and I think it is due him that we read the letter which he sent in as a supplement to the committee report. It reads: "To the chairman of the Committee of Six on Health Insurance: The tentative draft of your report to the President and House of Delegates of the Committee of Six on Health Insurance should, I believe, contain more facts. I do not believe that it is fair to place the blame on the California Legislature for what happened at Sacramento during and after the introduction and discussion of health insurance measures. Senator Edward H. Tickle, Leonard J. Difani, and the Coördinator-Secretary, Dr. S. J. Sullivan, are entitled to our full appreciation for their complete and unselfish coöperation. We cannot overlook the significant fact that the Senate passed a resolution signed by thirty-eight of the forty members of the Senate, the first paragraph of which reads: 'Whereas, the development of more adequate health services at rates within reasonable reach of self-supporting individuals and families of small and moderate incomes, is essential to promote the comfort, health, safety, economic security, and general welfare of the people of the State of California.'

"The Senate resolution has added meaning when we know it was passed after Senate Bill 454 was mangled and strangled by members of the medical profession, aided and abetted by dentists, hospital associations and members of organizations supported by doctors. In the face of facts which are on survey in the Senate survey and the SERA survey, we would not only sully ourselves, but be guilty of dereliction of duty if we deserted the field and left a large number of people of California who are receiving inadequate care and the many who are given no medical care or hospital care at all, to shift for themselves.

"I wish to reëmphasize what I said at the public hearing of the Senate Committee and at various meetings of the Committee of Six and other medical meetings. Until some sound method of distributing the cost of medical and hospital care is adopted and put into practice, (but not state medicine, to which I am strongly opposed), it is our duty as physicians to keep on working, no matter how much opposition we encounter from high or low places. Years ago, when workmen's compensation insurance was first discussed, members of our profession in California and elsewhere were more divided than they are today on health insurance. They adopted the unfortunate policy then which they seem to be ready to repeat today. I pleaded with the representatives of my profession twenty-five years ago to keep in touch with, and interest themselves in formulating, presenting and discussing workmen's compensation laws to guard the welfare of the injured workers, and also not to trespass on the rights and duties of attending physicians. The profession refused to heed my advice. Those that were in official positions then thought they knew better. They were opposed to workmen's compensation insurance, and they thought they could frustrate and defeat those who were for it by passing resolutions. As a result of such a futile policy, employees, employers and physicians, as well as the general public, are still suffering from mistakes made that physicians should and could have prevented. I believe we should give the Senate Committee, who are able and coöperative friends, with Senator Edward H. Tickle as chairman, our fullest coöperation in developing a more adequate health service within reasonable reach of self-supporting individuals and families of small and moderate means. While bickering and disagreement continue in the ranks of our profession, medical service paid for by taxation, federal, state and county, continues to increase. It will not be long, due to this short-sighted policy, until the general public will no longer be interested in the distribution of medical cost and the application of the insurance principle, for the simple reason that all citizens can receive medical care from these agencies, to the complete ruination of our profession and the permanent injury of public health." I wish to submit this letter as a part of the report.

Report of the Committee on Disciplinary Procedure

The Speaker: This minority report will also be referred to Reference Committee No. 1. The report of the Committee on Disciplinary Procedures consists of a by-law only and will lie on the table until Wednesday night's session, when it will be taken up for action. It is quite obvious from what Doctor Kelly has just read that it is very necessary that every delegate study the reports in this Pre-Convention Bulletin carefully. The Speaker would urge that upon you in order that we may come to the Wednesday night session, which is the all-important one, fully informed and ready to take such action as is proper and right. There is one other committee to report, Doctor Reinle's Committee on Medical Defense. Doctor Reinle. (Applause.)

Malpractice Insurance

Doctor Reinle: Mr. Speaker: The committee was assigned the task of investigating the medical defense insurance condition within this state, to determine its relation with the profession, and to suggest remedial policies if any should exist. We made a poll of the state societies and received some nine answers, and found conditions pretty much the same as in California, except in New York, where they issue a group insurance to part of their membership. The contacts were made by questionnaires sent to the entire membership, with representation of several prospective underwriters. That is, the membership of the California Medical Association received questionnaires, and we had answers from 2,700. Also, with the Legal Department of this Association and with the officers of this Association to procure, the procedure was as follows: First, the group plan. Prospective underwriters as brokers, stock company, mutual association, and reciprocal insurance, were given consideration. Second, is there at the present time an available medical defense and indemnity insurance to all members of this Association at a reasonable rate? Third, does necessity warrant the California Medical Association's taking an incursion into the insurance field? Fourth, the important factor: Can the Medical Society of the State of California pay under present circumstances?

In the consideration of the group plan, the history is important. You will recall that similar efforts were made in the past, which resulted not in the improvement of the professional security of our members but merely in dissipating the funds which were contributed. The group plan is, and will ever be, a misnomer. The individual member simply has to refuse payment of his annual payment and the group begins to break. The carrier company may and can terminate one and all policies by notifying each and all members thirty days before the anniversary date, or before the premium is due. The proscribing of such insurance is without cost to the carrier company and can be maintained one, two or three years, or when legal procedure costs and judgments exceed the premium incomes. Then the premiums are increased or the plan is terminated by the carrier. This plan has interfered with legitimate insurance, and in every location has increased premium rates in all companies. It may, however, be a solution of advantage in specialized groups, where premium rates are necessarily higher on account of potential hazards, or in small groups that can better control its policy. The underwriters fail to show anything other than their own interest. They suggest that the Association buy something unsought and unseen. They would allow this Association all the financial responsibility. Our Legal Department discussed the lawful set-up of an anticipated desire of the Association instituting an insurance program in such forms as a stock company, a mutual association, or reciprocal plan. Our counsel stressed the importance of the necessity of impounding all shares of stock in order to maintain its control to the point where no stock transfer could be made without the sanction of the Board of Directors or Trustees. A definite purpose in that was, in case the stock should fall into an estate where it could be purchased by outsiders, that his advice was that this stock should all be in escrow.

A mutual would be one in which the attorney-in-fact would have absolute control of the company, and a reciprocal would be one in which the members would elect their Board of Directors.

The counsel emphasized issuing the indemnity policies in the low brackets of $2,500 to $7,500 limit to each member, and a carrying charge equal to the now lowest commercial carrier. With reinsurance for any larger amount desired, he advised that the scope of insurance should spread to other fields of lesser hazards and be made to equalize the anticipated losses from the medical defense insurance; that is, that we would probably sell burglary and other liability insurance.

With reference to the question of available insurance to the members of this Association, many members throughout the state have been confused. The fact confronts us that, while there are at least seventy-nine companies that could write this type of insurance, only four companies continue in this special field. However, the fact remains that there are four companies doing this business in California and it is possible for members in good standing and under the age of 65 to procure a defense and indemnity policy in the following brackets: $2,500 to $7,500 for $22; $5,000 to $15,000 for $27, and $10,000 to $30,000 for $37. Provided your insurance is kept in force, there will be no discontinuance on the part of the company carrier.

The above statements seem to answer the question: "Why and where is the necessity for the California Medical Association's entering the insurance field?" Reasonable insurance is available. There is no attendant responsibility upon the officers and members of this Association, and let us remember first, last and all the time that our Association is not a plaything for any individual or group, but is essential to you, to me and to every one of us whose hopes are to practice medicine peacefully, profitably and happily.

The officers of the Medical Society of the State of California will make a definite report to the House of Delegates and, possibly, methods will be instituted to bring it to the attention of the membership of our Association. Certainly there are many who are not aware of its virtues, as Doctor Kelly explained tonight, and the importance of insurance in it. It is where we are represented by our general counsel as its attorney, who cares for our interests. It is well-officered and has a splendid legal department and offers, in addition, a brotherly service. It could be quickly evolved to meet any necessity, and I would like to state, at this time, that in this poll of the other state societies we find that the services rendered by the Medical Society of the State of California to us are at less cost than those rendered by any other society except one. The others charge considerably more, up to $24 per annum for the same service, or probably not as good, as is given us. Now in view of the fact that this committee can at the present time sense no necessity of the Association's entering the insurance business, and since we find reasonable insurance available to the membership at present, we respectfully recommend to the House of Delegates that the subject of medical defense be deferred until such time as some warranted action becomes necessary; so that at any time when we cannot buy reasonable, adequate and satisfactory insurance, then, and then only, should this Association enter the insurance business. I thank you. (Applause.)

The Speaker: This brief report in no wise gives you an adequate idea of the amount of work the committee has put in on this subject. They worked steadily and continuously, and their conclusions were not reached without very adequate consideration. This report will be referred to Reference Committee No. 1.

Report of the A. M. A. Delegates on the Kansas City Session

The chair will recognize Doctor Best, who will give us a report from the delegates to the American Medical Association convention held in Kansas City. Doctor Best.

Doctor Best: Mr. Speaker, Officers, and Members of the House of Delegates: Your delegates at the 1936 American Medical Association House of Delegates meeting in Kansas City consisted of Doctors Pallette, Dukes, Molony, Shepard, Scott, Kinney and Best. The delegates offer the following sketchy report of the proceedings at the House of Delegates. Doctor Pallette was elected chairman of the California delegates. Out of the seven California delegates, we were fortunate to have three appointed on important reference committees. Doctor Dukes was appointed on the Reference Committee on Medical Education and Hospitals; Doctor Scott was appointed on the Reference Committee for Miscellaneous Business, and your speaker was appointed on the Reference Committee for Rules and Order of Business. Valuable assistance was rendered this year to the California delegates by the efforts of our secretary, Doctor Warnshuis, who was very active in contacting the various members of the House. I may state, as a passing note from President McLester's address, the following is of interest, I think, to all of us: "It is becoming more apparent that doctors must become more and more public activity conscious."

Resolutions regarding a division of technical and professional services were presented by the Pennsylvania delegation and by the California delegation for the x-ray section. These were referred to the Committee on Medical Education and Hospitals, and at the final session the House of Delegates voted that technical service was a form of medical service, and therefore not separate from medical services. This applies to x-ray and other services, such as pathology.

Resolutions were introduced regarding the qualification of medical students, regarding the accrediting of hospitals for internship, and the status of students educated in foreign medical schools. Doctor Molony was instrumental in one of these resolutions.

As a matter of interest to some of us in California, it was the discussion of some of the New York delegation regarding the form of medical bar. A report was handed to each delegate, coming from the Legal Department, Doctor Woodward, revealing many arguments against such a set-up.

As you probably all know, after a great deal of discussion, which was deleted from the minutes, it was moved by the House of Delegates that Dr. Tate Mason be installed as president of the American Medical Association *in absentia*. This motion was made by our president-elect, Doctor Pallette, and seconded by Doctor Molony.

Regarding hospitals, the Committee on Medical Education and Hospitals considered it wise to insist on hospital staffs being members of the county society in order to qualify for intern training. It was also advised that medical schools devote a definite time to the teaching of medical economics.

Of interest to us out West, a resolution was presented by Oregon regarding hospitals receiving patients from certain hospital staff doctors whose patients were obtained in questionable or unethical manner, such hospitals to be refused the right of the Class A rating, fifth year intern training.

Another point of interest was a report by Doctor Carey which stated that consultation with the Federation of Labor brought forth the fact that labor does not want state medicine, and wishes to take care of its own medical problems.

An amendment to the by-laws of the American Medical Association was offered, giving the Judicial Council the power to try members of the American Medical Association direct.

Relating to the rating of hospitals in case of question regarding a hospital getting the proper rating, the complaint is to go to the state medical organization in which that hospital is located.

It was resolved that doctors whose diplomas were granted in foreign lands must obtain a license to practice in the country of their education first, and then either serve a year of internship in a Class A hospital in this country or complete a fourth year in a Class A medical school. This is the resolution that was introduced by Doctor Molony. I thank you. (Applause.)

The Speaker: Thank you, Doctor Best.

Legal Counsel's Report

Our legal counsel has a supplementary report, and at its conclusion the speaker will ask him to introduce to you an invited guest. The councilors this morning asked Mr. Alfred Siemon, of Bakersfield, who has been in the thick of the fight in county hospital work there, and was our friend through all this time, and a friend of the taxpayers who sees things straight. He knows more about this subject, probably, than any man in California, and we have asked him to come and talk to us tonight about it. Mr. Hartley Peart, our attorney. (Applause.)

Mr. Peart: Mr. Speaker, President Peers, and Members of the House of Delegates: I will make this report very brief, as I have already printed the report of the department for the year. One or two matters have come up since the report was printed.

Anesthesia Case.—The first matter is the case brought by Doctor Chalmers-Francis and others of Los Angeles against a hospital there and a nurse. Mr. Leroy Anderson, of Los Angeles, tried the case, and at the conclusion of the trial, which resulted unfortunately, the Council instructed us to assist on the appeal. Some of it was contained in our report, but since the report was published the Supreme Court, I regret to say, has decided the case against us. I would like to quote just a little bit from the opinion. We labored very hard on the briefs in this case, and were very happy to have the approval of Doctor Botsford and other anesthetists of San Francisco, and Doctor Francis and his counsel at Los Angeles, the counsel, of course, participating with us in the briefs. We thought that they were unanswerable, but the Supreme Court thought otherwise, and I want to call attention to what I think is the nub of this decision. They say:

> "There was much testimony as to the recognized practice of permitting nurses to administer anesthetics and hypodermics. One of the plaintiff's witnesses testified to what seems to be the established and uniformly accepted practice and procedure followed by surgeons and nurses, and that is, that it is not diagnosing nor prescribing by the nurses within the meaning of the Medical Practice Act. We are led further to accept this practice and procedure as established when we consider the evidence of the many surgeons who supported the contention of the defendant nurse and whose qualifications to testify concerning the practice of medicine in this community and elsewhere were established beyond dispute."

The Council has not yet determined whether we are to proceed further in the matter. We were anxious to have the court rule on the question squarely as to whether or not a physician, as the plaintiff in this case, was entitled to an injunction to prevent a non-licensed person from practicing. The court, however, says that it is not necessary to the decision in this case to decide that particular point.

We were also anxious to have other matters, particularly the matter of the delegation, if the court so rules and it is to be so understood in this decision, as to whether or not the delegation of a professional service can be made to a nurse or to any person other than a nurse, or at all.

Pacific Employers' Insurance Company.—Another case decided during the year in which we were more fortunate, and which is contained in the report, is the case of the Pacific Employers' Insurance Company. For the first time in California, we have established that a corporation cannot practice medicine directly or indirectly. In justice to that company (and this is not set forth in the report, but perhaps should have been), I would like to state that, following that decision the company modified and changed all the policies in conformity with the decision.

It has been a very extraordinary year, and probably it is fitting that during the year a fundamental rule in malpractice has been changed in this state. We have always assumed that the statute of limitations commenced to run from the date of the negligent act or omission. In the case of *Keiswell* v. *Hirsh*, a case arising in Los Angeles and handled by Mr. Gilbert's office for the Medical Protective Company of Fort Wayne, the Supreme Court says that, where a tube is allowed to remain in the abdomen of the patient, according to testimony, the negligence is continuing and is a repeated act of negligence for every day that the tube is allowed to remain there, and that the cause of action does not commence to run, so far as the statute is concerned, until the tube is removed. That is a very significant case for the members of the profession.

Another case of importance is the one that has been referred to tonight, *Goodall* v. *Bright*, where we were successful in establishing that the county hospitals are to be limited to the use of indigents. The case has excited a great deal of attention throughout the state with some very amazing results, namely, in San Joaquin County, at least according to the newspapers, the Board of Supervisors said they would not recognize the decision. I do not know whether they are proceeding according to that statement or not.

The Council requested me to telephone to Mr. Siemon today to ask him to come here, and he has flown from Bakersfield to give you first-hand information on conditions in Kern County. Mr. Siemon commenced this work for the Association a couple of years ago, and represented the plaintiff doctors and taxpayers in that action throughout the litigation. It was very strenuous litigation. He had to fight all the way, and it has been a great source of satisfaction to me to have commended him to the doctors for selection as their representative there. He is able, courageous, efficient, and a friend of the medical profession. I take great pleasure in presenting him to you. (Applause.)

Mr. Alfred Siemon of Bakersfield was presented. His remarks will appear in a subsequent issue.

The Speaker: Are there other supplementary reports of committees or officers? If not, the next order of business is the introduction of Resolutions.

Submittal of Resolutions by Delegates

The chair recognizes Doctor Barrow of Los Angeles.

Doctor Barrow: This resolution is presented to the House of Delegates for its consideration on Wednesday evening:

Resolution No. 1: On Hospital Insurance; Exclusion of Medical Services*.

The Speaker: This resolution will be referred to Reference Committee No. 2.

The chair recognizes Doctor Anderson of Fresno.

Dr. Anderson: Mr. Speaker and Members of the House of Delegates: Your Committee on Tax-Supported Hospitals wishes to submit the following recommendations:

Resolution No. 2: Concerning County Hospitals.

The Speaker: This resolution is referred to Reference Committee No. 2.

The chair recognizes Doctor Canelo of San Jose.

Doctor Canelo: The Santa Clara County Medical Society has unanimously requested that the delegates from that district present the following resolution:

Resolution No. 3: Regarding Payment for Hospital and Medical Services When Rendered in Automobile Accidents.

The Speaker: This resolution is referred to Reference Committee No. 2.

The chair recognizes Doctor Goin of Los Angeles.

Doctor Goin: I wish to submit the following resolution:

Resolution No. 4: On Procedure in Presenting Proposed Laws to the Legislature.

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* This and other resolutions are not printed here, because they are given as presented, and as amended, in the report of Reference Committee No. 2, which follows on page 86.

The Speaker: This resolution is referred to Reference Committee No. 2.

The chair recognizes Doctor Chalmers-Francis of Los Angeles.

Doctor Chalmers-Francis: The Anesthesiology Section of the California Medical Association respectfully submits to the House of Delegates the following:

Resolution No. 5: On the Practice of Anesthesia as a Medical Service.

The Speaker: This resolution is referred to Reference Committee No. 2.

The chair recognizes Doctor Chandler of San Francisco.

Doctor Chandler: The Board of Directors of the San Francisco County Medical Society has instructed its delegation to introduce the two following resolutions:

Resolution No. 6: On Malignancy in Relation to industrial Insurance.

Resolution No. 7: On Practice of Medicine by Corporations.

The Speaker: These two resolutions are referred to Reference Committee No. 2.

The chair recognizes Doctor Stone of San Francisco.

Doctor Stone: I wish to introduce the following resolution to the House of Delegates:

Resolution No. 8: Regarding Practice of Medicine by Corporations.

The Speaker: This resolution is referred to Reference Committee No. 2. If there are no other resolutions, is there any other business to come before the House before it adjourns?

The Secretary: Mr. Speaker, it is suggested, in view of the fact that the minutes of this meeting are being recorded, that these minutes be edited by the Speaker of the House of Delegates, the Chairman of the Council, and the Secretary, and thus constitute the minutes for this session.

The Speaker: If there is no objection, that ruling will be made.

(Announcements were made of the times and places for the meetings of the two Reference Committees.)

The meeting was adjourned at 11:00 p. m.

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SECOND MEETING

Wednesday Evening, May 27, 1936

The second meeting of the House of Delegates of the California Medical Association was convened in the ballroom of the Hotel del Coronado, Coronado, California, on Wednesday, May 27, 1936, at 7:30 p. m., with the speaker, Dr. W. W. Roblee of Riverside presiding.

The speaker instructed the secretary to call the roll.

The Secretary: Mr. Speaker and Members of the House of Delegates: It is my unpleasant duty to advise the Speaker of the House that our esteemed president, Doctor Peers, was called to San Francisco this afternoon because of the very serious illness of his mother. With the consent of the House, I should like to recommend that we mark him present at this meeting.

The Speaker: It is so ordered.

The secretary then called the roll.

The Speaker: The roll call is complete. There is a provision in the By-laws whereby if there be neither delegate nor alternate present, any other member of that county society who may be present can be seated. Are there any others who can be seated under that rule? If so, announce them now. The call is complete. The House is open and deemed ready for business.

I have a very pleasant announcement to make to you, one that you all have been anticipating. The next annual session of this convention will be held at Del Monte.

The Speaker: Permit me to remind every delegate who addresses the House to announce his name and his county.

The next item of business on the docket is always a very interesting one. We have come to the election of officers for the ensuing year. The Speaker will entertain nominations for president-elect.

Election of President-Elect

Doctor Geiger: Mr. Speaker, J. C. Geiger of San Francisco.

The Speaker: Doctor Geiger of San Francisco.

Dr. Geiger: Mr. Speaker, Members of the House of Delegates: It is my honor, and the honor of San Francisco County, to nominate a colleague of standing in our community, a friend and a man that we are glad to honor tonight. It is my pleasure to nominate for president-elect Dr. Howard Morrow of San Francisco. (Applause.)

The Speaker: Is there a second to Doctor Morrow's nomination?

Doctor Shoemaker: Mr. Speaker, Doctor Shoemaker of Los Angeles.

The Speaker: Doctor Shoemaker.

Doctor Shoemaker: It gives me great pleasure to second the nomination of Dr. Howard Morrow. I feel that the unanimous support of this House of Delegates is due Doctor Morrow for his outstanding support of scientific medicine and for his knowledge of the medical problems of the whole State of California.

Doctor Goin: Mr. Speaker, Doctor Goin of Los Angeles.

The Speaker: Doctor Goin.

Doctor Goin: Mr. Speaker, and members of the House: From time to time, but all too infrequently, there arises an opportunity to show honor to some man who has particularly distinguished himself in the field of medicine. In nominating Dr. Howard Morrow as president-elect of this Association, we are offering to a man who has long, faithfully, quietly and efficiently worked for organized medicine, and for the benefit of the California Medical Association, and in offering him this dignity we are conferring honor both upon ourselves and upon Doctor Morrow. I take pleasure in seconding Doctor Morrow's nomination.

The Speaker: Are there any other seconds? Are there any other nominations? If not, the Speaker declares the nominations closed. How will you elect?

Doctor Reinle: Mr. Speaker, Doctor Reinle of Oakland.

The Speaker: Doctor Reinle.

Doctor Reinle: I move that the secretary cast the ballot.

The Speaker: You have heard the motion that the secretary cast the ballot for Doctor Morrow as president-elect for the coming year. All those in favor say, aye. Contrary, no. The ayes have it. It is so ordered.

The Secretary: Mr. Speaker, your secretary does so cast.

The Speaker: Doctor Morrow is elected. (Applause.) I appoint Dr. J. C. Geiger of San Francisco and Dr. George Kress of Los Angeles to bring Doctor Morrow to the platform. (Applause.)

(Doctor Morrow is escorted to the platform.)

Members of the House of Delegates: I present to you the president-elect of the California Medical Association. Dr. Howard Morrow of San Francisco.

Doctor Morrow: Mr. Speaker, Members of the House of Delegates of the California Medical Association, Ladies, and Gentlemen: I greatly appreciate the honor which you have conferred upon me, and also of the privilege of being able to follow in the footsteps of President Pallette. I assure you that during my term of office I will always work hard for organized medicine. (Applause.)

Officers of the House of Delegates

The Speaker: I turn the gavel over to the Vice-Speaker of the House, Doctor Graves.

The Vice-Speaker: Nominations are in order for the Speaker of the House for the ensuing year.

Doctor Dukes: Mr. Speaker, Doctor Dukes of Alameda.

The Vice-Speaker: Doctor Dukes.

Doctor Dukes: Mr. Speaker and Members of the House of Delegates: In 1895 there stood upon a platform much larger than this a class about to graduate. One of the gentlemen in that class had on a long frock coat, a white tie and a white shirt. He has become a distinguished member of the medical profession. He has been honored as your Speaker for the past year, and it is with great pleasure that I again nominate my classmate. Will Roblee of Riverside for Speaker of this House. (Applause.)

The Vice-Speaker: Is there a second to the nomination?

Doctor Kelly: Mr. Speaker, Doctor Kelly of San Francisco.

Doctor Kelly: Having listened to Doctor Duke's nomination of Doctor Roblee, not having known Doctor Roblee until he forgot the white shirt but wore white whiskers, and having watched him preside Monday night and his performance tonight, I do not know of any better thing I can do than second Doctor Duke's nomination of him for Speaker of our House of Delegates for the succeeding year. (Applause.)

It was moved and seconded that the nominations be closed and the ballot cast. The secretary cast the ballot.

The Vice-Speaker: Doctor Roblee is declared the Speaker for the ensuing year. (Applause.)

Doctor Roblee: Thank you, gentlemen. This is a business job you have handed me. There is a lot of business to do and we will proceed immediately to it. (Applause.)

We now have the nomination for vice-speaker.

Mr. Speaker: Doctor Magan of Los Angeles.

Doctor Magan: I desire, Mr. Speaker, to nominate for the vice-speakership, Dr. John Graves of San Francisco. (Applause.)

The Speaker: Is there any second? The motion was seconded.

The Speaker: Are there any other nominations? If not, I declare the nominations closed.

It was moved and seconded that the ballot be cast. The secretary cast the ballot.

The Speaker: Doctor Graves will serve you for another year. (Applause.)

Doctor Graves: All I can say is, I thank you for the honor. (Applause.)

Election of District Councilors

The Speaker: We now proceed to the election of the councilor of the Second District. Dr. Carl R. Howson is the incumbent. Nominations are in order.

The Secretary: Mr. Speaker, the delegates of the Los Angeles County Medical Association, represented by Lowell S. Goin and Harlan Shoemaker of the Los Angeles County Medical Association, nominate Dr. Carl Howson for councilor of the Second District to succeed himself. (Applause.) The nomination was seconded:.

Doctor Snure: Mr. Speaker, Henry Snure of Los Angeles.

The Speaker: Doctor Snure.

Doctor Snure: I move the nominations be closed and that the secretary cast the ballot for Dr. Carl Howson to succeed himself. Doctor Ullmann of Santa Barbara seconded the nomination. The secretary cast the ballot.

The Speaker: Doctor Howson is elected. Stand up, Carl, and take a bow. (Applause.)

The Speaker: A candidate to succeed the incumbent, Dr. Alfred L. Phillips, from the Fifth District. Nominations are in order.

The Secretary: I have the following communication: A caucus of all seated delegates from the Fifth Councilor District was held and they have unanimously endorsed and hereby nominate C. Kelly Canelo as councilor for the Fifth Councilor District. Signed by the six delegates from that district.

The Speaker: Are there other nominations?

Doctor Scatena: Mr. Speaker, Doctor Scatena of Sacramento.

The Speaker: Doctor Scatena of Sacramento.

Doctor Scatena: I wish to place in nomination a man who has served his district for many years, and one who has served the California Medical Association with integrity and honesty, Dr. Alfred L. Phillips of Santa Cruz. (Applause.)

The Speaker: Dr. Alfred L. Phillips is placed in nomination. Are there any other nominations?

Doctor Ewer: Mr. Speaker, Doctor Ewer of Alameda County.

The Speaker: Doctor Ewer of Alameda.

Doctor Ewer: I take pleasure in seconding the nomination of Doctor Phillips, who has long occupied that position well and ably. I do this on behalf of the delegates of Alameda County. (Applause.)

The Speaker: Are there other nominations or seconds?

Doctor Larson: Mr. Speaker, Doctor Larson of Los Angeles.

Doctor Larson: I wish to endorse and second the nomination of Doctor Phillips.

Doctor Toland: Mr. Speaker, Doctor Toland of Los Angeles.

The Speaker: Doctor Toland of Los Angeles.

Doctor Toland: I rise to second the nomination of Doctor Phillips for councilor from the Fifth District.

The Speaker: Are there other nominations or seconds?

Doctor Powell: Mr. Speaker, Doctor Powell of San Joaquin. San Joaquin wishes to second the nomination of the man who has been nominated by the majority of the delegates in his own district. I want to second the nomination of Doctor Canelo for councilor.

It was moved and seconded that the nominations be closed. The Speaker named the following tellers: Doctors Best, Reinle, Powell, and Packard.

The Secretary: Mr. Speaker, as a matter of record there are 135 delegates entitled to vote.

The votes were tallied.

The Secretary: Mr. Speaker: Out of a possible 135 votes, Doctor Canelo received 30, Doctor Phillips 103. (Applause.)

The Speaker: Gentleman, by your vote you have elected Dr. Alfred C. Phillips to succeed himself as councilor of the Fifth District. Doctor Phillips, will you stand up, please, and give us a good bow? (Applause.)

The term of C. E. Schoff as councilor of the Eighth District is expired. Nominations are in order.

The Secretary: Mr. Speaker, delegates of the Eighth District, meeting in caucus, beg to submit the name of Dr. C. E. Schoff as councilor for the Eighth District for the ensuing term. Signed by Dr. F. N. Scatena of Sacramento and all the other delegates of that district. Nomination seconded.

The Speaker: Are there any other nominations or seconds? If not, the nominations are declared closed.

Doctor Reinle of Alameda moved that the secretary cast the ballot in favor of Doctor Schoff, and the motion was seconded by Dr. Carl Howson of Los Angeles. The ballot was cast.

The Speaker: The ayes have it and Doctor Schoff is declared elected. (Applause.)

Election of Councilors-at-Large

The Speaker: The term of Dr. C. O. Tanner, councilor-at-large, has expired. Nominations are in order for a successor to Doctor Tanner.

Doctor McClendon: Mr. Speaker, Doctor McClendon of San Diego.

The Speaker: Doctor McClendon of San Diego.

Doctor McClendon: I would like to place in nomination again, as I did three years ago, the name of C. O. Tanner as councilor-at-large.

Mr. Speaker: Is there a second to that nomination? Are there other nominations?

Doctor Barrow: Mr. Speaker, Doctor Barrow of San Diego.

The Speaker: Doctor Barrow of San Diego.

Doctor Barrow: As I had the pleasure three years ago to second the nomination of Doctor Tanner, in expressing my own desires and those of the San Diego delegation, I take great pleasure in now seconding the nomination of Doctor Tanner.

Mr. Speaker: Are there other seconds or other nominations? If not, the Speaker declares the nominations closed. How will you vote?

It was moved and seconded that nominations be closed.

The Speaker: The ayes have it. Doctor Tanner has been reëlected to the position. (Applause.)

The Speaker: The term of T. Henshaw Kelly as a councilor-at-large has also expired. Nominations are in order.

The Secretary: The delegates of the San Francisco Medical Society unanimously nominate Dr. T. Henshaw Kelly as councilor-at-large. Signed by Loren R. Chandler, chairman of the delegation. (Applause.)

Doctor Molony: Mr. Speaker, Doctor Molony of Los Angeles.

The Speaker: Doctor Molony of Los Angeles.

Doctor Molony: It gives me and, I am sure, also the members of the Los Angeles County and other Southern California delegations a great deal of pleasure to second the nomination of Doctor Kelly. There is no one, I am sure, in this whole House of Delegates who more richly deserves reëlection in the House of Delegates or as councilor of this Association than Doctor Kelly. It is a very happy occasion for all of us that Doctor Kelly has been nominated for this position. (Applause.)

The Speaker: Are there other nominations?

Mr. Speaker: Doctor Chandler of San Francisco.

The Speaker: Doctor Chandler.

Doctor Chandler: It gives me more than pleasure, if that is possible, to second the nomination of T. Henshaw Kelly as councilor-at-large. He gives about ten times as much of his time to this Association as any man should be asked to give, and he gives about four times as much as he himself should give. It is a great pleasure to second the nomination of Doctor Kelly.

It was moved and seconded that the nominations be closed.

The secretary cast the ballot.

The Speaker: Doctor Kelly is elected. (Applause.)

Election of Delegates to the American Medical Association

We now come to the election of delegates to the American Medical Association. The term of Dr. C. A. Dukes of Oakland has terminated. Nominations are in order.

Doctor Crosby: Mr. Speaker, Doctor Crosby of Alameda County.

The Speaker: Doctor Crosby of Alameda.

Doctor Crosby: Perhaps there is no man who has been willing to give the time, and no man who retains the quintessence of the energy of that famous class of '95 so well as the bald-headed incumbent whose term has now expired. We are amazed at the work, at the consistent energy and earnestness of Charlie Dukes in all of the things for the advancement of medicine that we are seeing, and it is a great pleasure and a privilege to nominate him to succeed himself. (Applause.)

Doctor Lawson of Alameda and Doctor Toland of Los Angeles seconded Doctor Duke's nomination.

The Speaker: Are there any other nominations? If not, we declare the nominations closed. It was moved and seconded that the secretary cast the ballot. The secretary did so cast.

The Speaker: The ayes have it. Charles Dukes, for the glory of the class of '95, will you please stand?

Clarence Toland's term has also expired. Nominations are in order for that position.

Doctor Askey: Mr. Speaker, Doctor Askey of Los Angeles.

The Speaker: Doctor Askey of Los Angeles.

Doctor Askey: I am unable tonight to do justice to the man whose name I wish to present to this body. He is a man who is known to all of you, and who is loved by all of us—a man who has done much for organized medicine in this State. I refer to our president-elect, Dr. Edward M. Pallette. (Applause.)

The Speaker: Doctor Pallette is placed in nomination. Are there other nominations or seconds?

Doctor Larson: Mr. Speaker, Doctor Larson of Los Angeles. I second the nomination of Doctor Pallette.

The Speaker: Doctor Larson of Los Angeles seconds. Are there others? Other nominations? If not, the Speaker declares the nominations closed.

Doctor Kelly of San Francisco moved and Doctor Dukes of Alameda seconded the motion, that the secretary cast the ballot. The secretary did so cast.

The Speaker: You have elected Doctor Pallette. Doctor Pallette, will you stand and take another bow?

The Speaker: The term of Junius B. Harris has expired. Nominations are in order.

Doctor Harris: Mr. Speaker, Doctor Harris of Sacramento. As an incumbent it is my privilege, and indeed it is my pleasure, to place in nomination to succeed myself one of the greatest men who has ever adorned the chair of presidency of our Association, and you all know I am nominating Dr. Bob Peers—Dr. Robert A. Peers of Colfax. When I do this, I am nominating the man who has gone the length and breadth of this State and has visited every medical society, unifying and coördinating all the different factions that we have; a man who will, at our national meeting, lend force and dignity and add to the glory of the name of California. I am enthusiastic and hopeful when I place in nomination the name of Robert A. Peers to succeed Junius Harris.

The Speaker: Dr. Robert A. Peers is nominated. Are there other nominations?

It was moved and seconded that the nominations be closed. The motion was made and seconded that the secretary cast the ballot. The secretary did so cast.

The Speaker: You have elected Dr. Robert Peers.

A successor to William R. Molony is next in line.

Doctor Adams: Mr. Speaker, Doctor Adams of Riverside.

The Speaker: Doctor Adams of Riverside.

Doctor Adams: I want to afford myself the pleasure of placing in nomination for delegate to the American Medical Association for the ensuing term the name of a man who has served the people of the State of California, as well as the medical profession of this State, on the Board of Medical Examiners during the last twenty-three years. He has served as president of that board during the last few years. He has been a faithful, courageous and dynamic force on the floor as vice-counsel in the deliberations for scientific medicine. Mr. Speaker, I afford myself the pleasure of nominating Dr. William R. Molony to succeed himself.

This nomination was seconded.

The Speaker: Are there any other nominations? If not, the Chair declares the nominations closed. Doctor Howson moved and Doctor Askey seconded, that the secretary cast the ballot. The secretary did so cast.

The Speaker: Dr. William R. Molony has been elected to succeed himself.

The Speaker suggests that, inasmuch as it is quite unnecessary to have seconds, we speed this up a bit now by cutting out the seconds.

Now an alternate for Doctor Dukes of Oakland.

Doctor Makinson: Mr. Speaker, Doctor Makinson of Alameda.

The Speaker: Doctor Makinson of Alameda.

Doctor Makinson: I wish to place in nomination a man whom you all know, who is well known throughout the state, who has served twenty-five years in the Council, a past president of the California Medical Association, none other than our good friend, Doctor Ewer, to succeed himself.

The Speaker: Are there any other nominations? Doctor Ewer is nominated. If there are no other nominations, the Speaker declares the nominations closed. Doctor Crosby of Alameda moved, and Doctor Reinle of Alameda seconded, that nominations be closed and the secretary cast the ballot. The secretary did so cast.

The Speaker: It is so ordered. Doctor Ewer is reelected. (Applause.)

An alternate in place of Dr. Edward M. Pallette.

Doctor Daniel: Mr. Speaker, Doctor Daniel of Los Angeles.

The Speaker: Doctor Daniel of Los Angeles.

Doctor Daniel: I wish to nominate a man who has been president of the California Medical Association and a man who has been on the Board of Councilors for years, Dr. William H. Kiger. (Applause.)

The Speaker: Doctor Kiger is nominated. Are there other nominations? If not, the nominations are closed. It was moved by Doctor Askey of Los Angeles, and seconded by Doctor Kelly of San Francisco, that the ballot be cast. The secretary did so cast.

The Speaker: You have elected William H. Kiger as alternate. (Applause.)

An alternate to Dr. Robert M. Peers is now to be elected.

Doctor Schoff: Mr. Speaker, Doctor Schoff of Sacramento. We are quite famous in northern California for the adornments that some of our outstanding men attain up here. I refer particularly to their red heads. You have just listened to June Harris, the outgoing representative, make his nomination of Doctor Peers, who is also a redhead, and I in turn take pleasure in nominating as the alternate to Doctor Peers, Fred F. Gundrum of Sacramento.

The Speaker: Fred F. Gundrum is nominated. Are there other nominations? If not, we declare the nominations closed. Doctor Howson moved, and Doctor Dukes seconded, that the secretary cast a unanimous ballot. The vote was taken.

The Speaker: You have elected Dr. Fred Gundrum. (Applause.)

Nomination for alternate for William R. Molony is in order.

Doctor Remmen: Mr. Speaker, Doctor Remmen of Los Angeles.

The Speaker: Doctor Remmen of Los Angeles.

Doctor Remmen: I have the honor to place in nomination the name of one of our colleagues who has served long and faithfully on behalf of the Association, Dr. John C. Ruddock.

The Speaker: John C. Ruddock is nominated. (Applause.) Are there other nominations? If not, the nominations are closed. Doctor Kelly of San Francisco moved, and Doctor Schaupp of San Francisco, seconded a motion that the secretary cast the ballot.

The Speaker: The ayes have it. It is so ordered. The secretary cast the ballot.

I now turned the gavel over to the Vice-Speaker.

Amendments to By-Laws: Disciplinary Code

Vice-Speaker: The House will have the authority to add certain amendments to the by-laws, copies of which are to be found in the Pre-Convention Bulletin, and they will be presented by the chairman, Doctor Roblee, and your action will be asked after the reading of each amendment.

Doctor Roblee: Mr. Speaker, Gentlemen of the House: In consequence of the social and economic unrest that have developed in our land, and because of the repercussions thereof which have come to the members of our profession, not only have sharp differences of opinion developed among us as to courses to be pursued, but in an increasing number of instances these have resulted in charges of unethical conduct against members of component county units. These hearings have developed the fact that there is now a total lack of uniformity in the various constitutions and by-laws dealing with this subject. It is very easy to enroll a man as a member of a county medical society, but once he is in, he has established for himself certain moral, professional and property rights that are of great value to him. He should be secure in those rights, so long as he conforms to the rules laid down by the organization, and the civil courts have confirmed this right in numerous cases on record. In our organization this right is provided for by appeals to the Council of the California Medical Association, thence to the Judicial Council of the American Medical Association; and it can be taken from thence to the civil courts.

During the past two years your Council has heard several appeals from the decisions of the county societies. One case was carried to the American Medical Association, and there the decision was reversed entirely because of mistakes made in procedure. Your Council appointed a committee to survey this entire question, and at the Monday evening session of this House it offered a by-law which, if adopted, it feels will chart the course for the county units which, if accurately followed, will protect the interests of all parties concerned. It covers every moral and legal requirement. This and other drafts of the by-law have been carefully reviewed by our attorney, the Council, and the Executive Committee, and its adoption is recommended. It will be necessary to amend the draft which you hold in your hands in a few details in view of certain experiences the Council has had in conducting some recent appeals that were before it. The adoption of this by-law will make it automatically a part of the by-laws of every component county society and the needed uniformity will be obtained. The warrant for this is found in Chapter I, Section 1 of the By-Laws of the California Medical Association. In order to effect a harmonious result, and in order that the by-laws as amended may not lack organization, the following amendments take the form of, first, an outright repeal of Sections 2 to 5, inclusive, of Chapter II of the by-laws of the California Medical Association, and, second, a substitution therefor of new sections 2 to 5, inclusive, of Chapter II, incorporating sections governing disciplinary procedure in the component county societies, as well as disciplinary procedures in the California Medical Association itself. This method makes the amendment somewhat bulky, but in the end it will avoid a great deal of the confusion that would necessarily arise if specific new sections should be added to Chapter II without regard to the resultant lack of organization. Your committee offers this by-law:

Resolved, That the by-laws of the California Medical Association be amended by striking out all of Sections 2, 3, 4, and 5 of said Chapter II thereof and by inserting in lieu of said Sections 2, 3, 4, and 5 of Chapter II, new sections to be numbered Sections 2, 3, 4, and 5, respectively, of said Chapter II and reading as follows:

"Section 2. Termination of Membership.

"(a) By Expulsion from Component County Societies.—Expulsion from any component county society, after due proceedings in accordance with these by-laws, upon becoming final terminates all the rights and privileges in this Association of the member so expelled.

"(b) By Failure to Pay Dues.—If the annual assessment of dues, payable to this Association by any member of this Association, is not paid on or before April 1 of any year, such member shall automatically lose his membership in this Association as of April 1 of such year. The Council of this Association, in his discretion, upon payment of such unpaid dues, and any other assessments or dues accruing thereafter, may at any time reinstate such member."

Mr. Speaker, I move the approval of the by-laws so far as read.

Vice-Speaker: You have heard the by-law as read by the chairman of the Disciplinary Procedures Committee. What is your pleasure? Will someone move its adoption?

Doctor Best of San Francisco moved its adoption, and Doctor Askey of Los Angeles seconded.

Vice-Speaker: It has been regularly moved and seconded that the amendment so far as read be adopted. Is there any debate? All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"(c) By Revocation of Physician's and Surgeon's Certificate.—Any active member whose license to practice medicine and surgery in the State of California is revoked shall, upon receipt of sufficient written evidence of such revocation and of its legal finality by the Secretary of this Association, thereupon cease to be a member of this Association."

Mr. Speaker, I move that the word "sufficient" in the third line be stricken out, and the words in the next line, "and of its legal finality," be stricken out.

Vice-Speaker: You have heard the motion. Is there a second? Doctor Larson of Los Angeles seconded.

Vice-Speaker: Is there any debate? All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"(d) Acts and Conduct Subjecting Member to Censure, Suspension or Expulsion by Component County Society.—Any active member of a component county society who has been adjudged guilty of a criminal offense involving moral turpitude, or who has been duly adjudged guilty by his society, in accordance with the procedural requirements of these by-laws, of gross misconduct as a physician or a surgeon or of a violation of any of the provisions of the constitution or by-laws or principles of professional conduct of his society or of the principles of medical ethics promulgated from time to time by this Association or by the American Medical Association, shall be subject to censure, suspension or expulsion from his society by such component county society."

I am not going to move the adoption of these until we come to some deletions or changes. I shall pause for a moment after each paragraph, and if anyone has anything to offer on the subject rise and so state.

"(e) Right of Committee on Membership and Organization of this Association to Prefer Charges.—(This is a new section.) If a member of this Association is believed by the Committee on Membership and Organization of this Association to be guilty of conduct justifying censure, suspension or expulsion from his component county society, said committee may prefer written charges in the form and in the manner hereinafter specified with the secretary of the accused member's county society and may, through a member or members thereof, perform all acts that are reasonably necessary and proper in the prosecution of said charges."

That gives the California Medical Association, through its committee, an opportunity to initiate proceedings direct in case there is a flagrant violator of medical ethics against whom, for some reason or other, the county society does not feel itself ready to initiate charges. I will say that the American Medical Association beat us to it on this provision and adopted a similar provision at the last meeting, whereby the American Medical Association can also initiate proceedings direct against a member if it is deemed necessary.

"Section 3. Procedure to Be Followed by Component County Societies with Respect to Involuntary Loss of Membership.

"(a) Disciplinary Procedure for Component County Societies.—The procedure to be followed by each component county society with respect to the censure, suspension or termination of membership of a member shall be:"

Mr. Speaker, I move that the words "termination of membership" be deleted and there be substituted therefor the word "expulsion."

Vice-Speaker: You have heard the motion. Is there a second?

Doctor Scarboro of Fresno seconded the motion.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"(1) Charges.—Formal Requirements.—A Formal Charge Must First Be Made.—Such charge must be in writing, signed by the accuser, and if made by a person other than a member of the Society must be sworn to before an officer of the State of California authorized to administer oaths. Charges must state the acts or conduct complained of with reasonable particularity.

"(2) Charges.—Filing.—Secretary's Duties.—Presentation to Board of Directors (or Grievance Committee).—Charges must be filed with the secretary of the accused member's society. At the first regular or special meeting of the Board of Directors of such component county society held after charges are filed, the secretary must present said charges to the Board. The Board of Directors shall then or at any adjournment of said meeting, but not more than thirty days after the date of such regular or special meeting, consider the charges, and in its discretion determine whether or not further proceedings shall be conducted. If the Board determines that no further action shall be taken, the charges shall be dismissed.

Mr. Speaker, I move that between the words "members and society" in the third line of this paragraph the words "component county" be inserted.

Vice-Speaker: You have heard the motion. Is there a second?

Doctor Mentzer of San Francisco seconded.

Vice-Speaker: Is there any debate? All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"If a component county society has no Board of Directors and more than ten members, its members must, at a regular meeting of the Society, elect a grievance committee of not less than five (5) active members in good standing; two members shall be designated by the Society to serve for a period of one year, two members shall be designated to serve for a period of two years, and one member shall be designated to serve for a period of three years. At the expiration of the terms of office of the respective members of such committee, successors shall be elected in like manner to serve for a period of one year each. Such grievance committee shall exercise all the power and perform all the duties herein conferred upon boards of directors in the manner and within the times herein provided. If a society has less than eleven members, the entire society, exclusive of the accuser and accused, shall constitute the grievance committee. All references herein to board of directors shall be deemed to include boards of councilors, grievance committees, and component county societies of ten members or less."

Mr. Speaker, between the words "councilors" and "grievance committees" in the next to the last line of that paragraph, I move that we insert the words "and such."

Vice-Speaker: You have heard the motion. Is there a second? Doctor Howson of Los Angeles, seconded the motion.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"(3) Service of Charge Upon Accused.—If the Board of Directors determines that further action, with respect to said charges, shall be taken, the Board must, within fifteen (15) days after such decision, cause a copy of the charges to be served upon the accused by personally delivering a copy thereof to him, or by depositing a copy thereof in the United States mail, registered and addressed to the accused either at his last known office or at his last known residence.

"(4) Time and Place for Hearing.—Service of Notice Thereof.—The Board of Directors shall, at said meeting at which its decision to proceed is made, fix a time and place for a hearing of said charges. Written notice of the time and place set for the hearing shall be served upon the accused within fifteen (15) days by personal delivery or registered mail."

Mr. Speaker, at this point I move the insertion of the words "as aforesaid."

Vice-Speaker: You have heard the motion. Is there a second? Motion seconded by Doctor Kelly of San Francisco.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"The time so set for a hearing shall be not less than fifteen (15) days after the accused has been served, as aforesaid, with a copy of the charges and with the notice of the time and place set for the hearing; said hearing must be held within the county in which the accused holds his county society membership. The hearing before the Board of Directors must actually commence within *six months* from the date of the filing of written charges. Failure to comply with this requirement shall constitute an automatic dismissal of the charges.

"(5) Right of Accused to Answer, Time to Answer, Formal Requirements.—The accused may, not less than five (5) days before the time set for a hearing, answer said charges. The answer shall be in writing and the original and three copies shall be filed with the secretary of the Society, provided, however, that the failure of the accused to answer shall not be deemed to be an admission of the truth of the charges or a waiver of the accused's right to a hearing with respect to said charges."

We try to protect a man and at the same time to see that justice is done in other respects.

"(6) Rules Governing Hearing.—Duties of Referee of Society, Advice As to Procedure Only.—The Board of Directors shall give ample opportunity both to the accuser and the accused to be heard in person, and to present all testimony, evidence, or proofs which the accuser or the accused may deem necessary, provided that the Board may reject all testimony, evidence, or proofs, which in the judgment of the Board, are immaterial, irrelevant or unnecessarily repetitious. Neither the accused nor the accuser shall be represented by an attorney-at-law."

Mr. Speaker, I move that the last sentence "neither the accused nor the accuser shall be represented by an attorney at law" be stricken out.

Vice-Speaker: You have heard the motion. Is there a second? The motion was seconded.

Vice-Speaker: All those in favor will signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"The Board in its discretion may be represented by a referee appointed by the Council or Executive Committee of this Association (that is the C. M. A.) to advise the Board, the officers of the Society, the accuser and the accused, with respect to procedure only. It shall be the duty of said referee to answer all procedural questions submitted by said persons and, on his own initiative, to call attention to any procedural errors."

Mr. Speaker, I move the insertion between the words "referee" and "appointed by the Council" of the following: "who may, but need not, be a member of this Association, and who shall be."

Ordinarily the councilor of the district would serve as such a referee, but we feel that it may be that the society or the accused might desire an attorney. If so, it would be their privilege to have one.

Vice-Speaker: You have heard the motion. Is there a second? The motion was seconded.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"(7) Record of Proceedings.—Shorthand Reporter Discretionary.—Duty of Secretary to Preserve Record.—Right of Accused to Copy.—The secretary shall preserve the original of said charges with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, the original notice of the time and place set for the hearing with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, and the original of the answer filed by any member accused if an answer be filed. At the hearing, the Board of Directors may, in its discretion, and at the expense of the Society, employ a competent shorthand reporter to record and transcribe into typewriting testimony adduced on behalf of the accuser and the accused. If the Board shall decide not to employ a reporter, then the secretary of the Society shall be present and shall keep and prepare a summary of all testimony adduced. The original charges with certificate of service thereof, the original notice of time and place for hearing with certificate of service thereof, the answer or answers, may be filed, if any be filed, all documentary evidence introduced at the hearing, all typewritten transcript of the testimony or the secretary's typewritten summary, and the written decision of the Board of Directors shall constitute the record of the entire proceedings. The secretary shall, upon receipt of a sum sufficient to defray the cost thereof, cause a copy of such record to be transcribed and furnished to the accused. The secretary shall keep such record and, in the event of an appeal to the Council of this Association, shall, upon the request of its secretary, transfer said record to the Council."

"(8) Decision of Board. — When Must Be Written. — Rules Governing Vote of Board.—The Board of Directors, after having given the accuser and the accused member full opportunity to be heard, shall conclude the hearing and shall render its decision in writing not more than thirty (30) days thereafter. Hearing shall include any oral arguments and the filing."

Mr. Speaker, at this point I move we insert the words "and consideration."

Vice-Speaker: You have heard the motion. Is there a second? Doctor Hamlin seconded the motion.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"and consideration of any written briefs. The Board of Directors by a two-thirds affirmative vote of all of the eligible members of the Board present and voting may exonerate or may censure, suspend or expel the accused member as the facts in its opinion may justify."

Mr. Speaker, at this point I desire to move the insertion of the following: "The decision of the Board of Directors may be expressed in resolution adopted by said vote. The decision may not contain an opinion and need only be signed by the secretary or the acting secretary of the component county society."

It was moved, seconded and ordered, that the amendment be accepted.

Doctor Roblee:

"The failure of at least two-thirds of all the members of the Board of Directors present and voting to agree upon the disposition of the charges shall act automatically as a dismissal of the same. No member of the Board of Directors not present at the said hearings for the entire time thereof shall be entitled to vote with respect to the disposition of the charges."

"(9) Suspension. — Maximum Period. — Status of Suspended Member.—If the Board of Directors shall determine to suspend an accused member, the term of such suspension shall be within the discretion of the Board, provided that in no case shall a member be suspended for a period greater than one year. A suspended member shall have no rights or privileges in the Society, provided that at the expiration of the period of suspension such suspended member shall not be reinstated to membership in good standing until he applies for reinstatement and pays all dues accrued during said period of suspension."

"(10) (a) Board's Decision.—Secretary to Send Copies.—Within ten (10) days after the decision of the Board of Directors, the secretary of the Society shall transmit a copy of the decision to the Board, to the accused member or members and to the secretary of this Association."

"(b) Board's Decision Final.—Subject to Appeal.—The action of the Board of Directors of a component society shall be final, subject only to appeal to the Council of the California Medical Association in such cases as are provided in these by-laws."

Mr. Speaker, I move the insertion at this point of the following: "The decision of the Board of Directors shall not become effective until the expiration of ten days after time during which an appeal may be taken to the Council of this Association. Filing an appeal with the secretary of this Association shall automatically stay the execution of the decision of the Board of Directors of the component county society until written notice of the action of the Council of this Association with respect to appeal has been received by the secretary of the component county society from which the appeal was taken."

Vice-Speaker: You have heard the motion. Is there a second? Doctor Toland of Los Angeles seconded the motion.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"(c) Technical Rules of Evidence Not to Govern Disciplinary Hearings.—All hearings with respect to the disposition of charges against a member of a component county society shall be held and conducted in such manner as to ascertain all the facts fairly to the accuser and accused, eliminating all formal or technical rules and requirements which ordinarily pertain to judicial proceedings."

"(d) Members Agree that No Cause of Action Shall Accrue.—Any person so charged, censured, suspended, or expelled shall have no claim or cause of action against this Association, a component county society or any member, director, councilor or officer, thereof by reason of such charges, or the hearing or the consideration thereof or censure, suspension or expulsion therefor."

That would not prevent a suit being filed. You can file a suit for almost anything, but it would certainly go a long way in court in the protection of a member.

"(e) Expelled Members.—Right to Apply for Membership.—When Accrues.—Any person whose membership has been involuntarily terminated in a component county society by reason of violation of these by-laws may apply for membership after the expiration of one year from the date said membership was terminated, and such application shall be considered in the same manner as a new application for membership."

"Section 4. Procedure for Appeal to Council.

"A member of a component county society censured, suspended or expelled by his county society may appeal from the action of such component county society to the Council of this Association within the period of two months succeeding the date of such censure, suspension, or expulsion. Appeals shall be in writing and be filed within the said period of two months in the office of the secretary of this Association. Upon the filing of an appeal the secretary shall present it to the first subsequent meeting of the Executive Committee or the Council. Appeals shall be heard by the Council only after reasonable notice in writing of the time and place of the hearing of the appeal has been given to the appellant member and the president and secretary of the component county society."

Mr. Speaker, I move that after the word "notice" in the third to last line that the words "of not less than ten (10) days" and following the last word, "society," "as provided in Section 3 hereof" be inserted.

Vice-Speaker: You have heard the motion. Is there a second? Motion seconded.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Doctor Roblee:

"Section 5. Rules Governing Appeals.

"In hearing appeals, the Council shall review all questions of procedure, and may, in its discretion, review the evidence contained in the record of the original proceedings held before the Board of Directors of the component county society. The Council may make findings of fact contrary to, or in addition to, those made by said Board of Directors. Such findings may be based on the evidence adduced before said Board of Directors, either with or without the taking of evidence by the Council. The Council may, for the purpose of making such findings or for other purpose in the interest of justice, take additional evidence of or concerning facts material to the questions involved, or may, for such purpose, appoint a committee of its members or any notary public to act as referees or referee for the taking of such additional evidence."

Mr. Speaker, at this point I desire to transpose paragraphs. The second paragraph of rules reading:

"Such referee or referees shall render a report in writing to the Council, which report shall contain a clear statement of the facts found by the referee or referees from the testimony or evidence adduced."

"The Council shall use any lawful means which in its judgment will best and most fairly present all the facts involved."

That paragraph goes farther up where it belongs.

Motion seconded, vote taken and amendment duly ordered.

Doctor Roblee:

"The Council may affirm, reverse or modify the decision of the Board of Directors or make such other disposition of the proceedings as it may deem proper."

"In every case of an appeal the individual councilors and the Council, through a committee thereof, prior to any hearing being held upon the appeal, shall exert all proper efforts at conciliation and compromise."

"Neither the appellant member nor the component county society shall be represented by an attorney-at-law."

Mr. Speaker, I move the deletion of the last sentence. Motion seconded, vote taken and change in amendment duly ordered.

Doctor Roblee:

"This Association may be represented by its attorney to advise the Council upon procedural questions only."

"The decision of the Council shall be final and bind the appellant member and the component county society."

Doctor Roblee: Gentlemen, there is a clear track to be followed. I move, Mr. Speaker, the adoption of the by-laws as amended.

Vice-Speaker: You have heard the motion. Is there a second? Motion seconded.

Vice-Speaker: All those in favor signify by the usual sign.

Vice-Speaker: It is so ordered.

Thank you, Doctor Roblee.

(The Speaker returned to the chair).

Committee Appointments

The Speaker: We have now the announcement and approval of members of standing committees selected by the Council.

Mr. Speaker, the secretary speaking. Before making this announcement, I would like to inform the members that by 5 o'clock this afternoon 1,098 members had registered and seventy-one guest doctors from this and other states; there were sixty-seven exhibitors; there were 346 members of the Auxiliary. The total registration at 5 o'clock was 1,582.

Mr. Speaker, I am directed by the Council to transmit to the House its nomination of the following appointees for the standing and special committees of the Association:

Committee on Associated Societies and Technical Groups, Dr. William G. Geistweit, reappointed.

Committee on Health and Public Instruction, W. R. P. Clark, San Francisco, reappointed.

Committee on History and Obituaries, J. Marion Read of San Francisco, reappointed. Dr. Frank R. Makinson of Alameda County is made the chairman of the committee.

Committee on Hospitals, Dispensaries and Clinics, Daniel R. Crosby of Oakland, reappointed.

Committee on Industrial Practice, Mott R. Arnold, San Diego, reappointed.

Committee on Medical Defense, Fred R. De Lappe of Modesto, reappointed.

Committee on Medical Economics, William R. Molony, Sr. of Los Angeles, reappointed.

Committee on Medical Education and Medical Institutions, Loren R. Chandler, chairman, reappointed.

Committee on Membership and Organization.—At the request of Doctor McGavack, who desires to be relieved from committee duty, the Council nominates and transmits the name of Dr. Don L. Pratt.

Committee on Postgraduate Activities, Clarence G. Toland, reappointed as chairman of the committee.

Committee on Publications, Oscar Reiss of Los Angeles, reappointed.

Committee on Public Policy and Legislation.—Replacing Fred R. De Lappe of Modesto, T. Henshaw Kelly of San Francisco.

Committee on Scientific Work, Secretary of the Section on General Medicine and Secretary of the Section on General Surgery. Their names have not yet been transmitted to the secretary. The President of the Association nominates and recommends the appointment of the following three members to fill the terms of members whose terms of office has expired:

Harold Brunn of San Francisco; Henry J. Ullman of Santa Barbara; Clarence G. Toland of Los Angeles.

The Speaker: You have heard the report of the Council in this matter. What is your pleasure?

Dr. S. H. Mentzer, San Francisco, moved and Doctor Anderson, Fresno, seconded that the appointments be approved.

The Speaker: All those in favor say aye.

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Report of Reference Committee No. 1: On Reports of Officers and Committees

The Speaker: We will now have the report of the Reference Committees. Reference Committee No. 1 on the Reports of Officers and Committees. I recognize Dr. Eric Larson, chairman of the committee.

Doctor Larson: Mr. Speaker, members of the House of Delegates: Your Reference Committee on Reports of Officers and Standing and Special Committees desires to present the following report to the House of Delegates for its approval.

Doctor Larson read the report, which was accepted as read and as follows:

Mr. Speaker and Members of the House of Delegates: Your Reference Committee on Reports of Officers and Standing and Special Committees desires to present the following report to the House of Delegates for its approval:

Report of the President.—Your Reference Committee commends President Peers for having conducted the affairs of the Association in a most able manner. He has visited every corner of the state, and has brought cheerfulness to and closer coöperation between the component societies and the parent body. It is leadership such as this that makes for progress and unity in the affairs of the California Medical Association. He has stressed the necessity for enlarging our membership to include many qualified physicians who should take an active part in our organization. Your Committee recommends that every county society should be visited in like manner each year by the officers, to obtain an increasing measure of the coöperation which our president has this year received.

Report of the President-Elect.—It is the Reference Committee's opinion that our president-elect is completely qualified to carry on the work in a manner as efficient as has his predecessor. He has had many years of active and constructive leadership in our association and at this particular time we are most fortunate in having such an individual to carry on the affairs of our organization. We feel certain that he will choose able and efficient committee members to assist him in the solution of difficult problems.

Report of the Council.—In reviewing the financial report of the Society for the past year it is obvious that the expenditures have been so far in excess of the resources that careful consideration will be necessary in the future in order that our financial status may increase its security. The financial statement of this last year reveals a deficit. This deficit was largely due to the demands of the House of Delegates upon the Council. In the future, careful consideration by the House of Delegates should be given to any expenditures in a sum larger than the annual income, in order that a proper balance be maintained in the treasury. The surplus, which is less than it has been for a number of years, should be increased as rapidly as possible to meet such emergencies as will occur.

During the past year our secretary-treasurer, by able and efficient management of our medical association, has saved $12,641.98, for which he is to be commended. Your Reference Committee feels that as our organization increases, even greater savings and earnings may be effected.

This committee believes that the Council acted judiciously in avoiding a possible expenditure of $35,000 in the Qualifying Certificate Law, and is to be commended for this action.

The Reference Committee approves the Council's recommendation to increase the annual dues to $15 a year.

Bearing in mind the ever-important matter of economy, we believe that the expense incurred by one annual meeting of the county secretaries, which is not excessive, is probably justified.

Appeals.—Your Reference Committee commends the Council's advice to have consultation with the district councilor and the secretary of the California Medical Association in matters where disciplinary action is contemplated by any county society.

Malpractice Insurance. — The Reference Committee thanks the Council for its efforts in making an extensive study by the Council and a special committee on the problem of malpractice insurance.

Amendments.—Your Reference Committee presents an amendment to the By-Laws introduced by the Council which may properly advance the expanding functions of the Association to insure efficiency. It provides that the chairman of the Committee on Postgraduate Activities be a member of the Public Relations Committee. The amendment reads as follows:

Resolved, That Section 20 (a) of Chapter V of the By-laws of this Association be and is hereby amended by adding after the phrase "The Committee on Industrial Practice and the Cancer Commission" and before the phrase "and the President," contained in the first paragraph of said Section, the following:

"The Committee on Postgraduate Activities."

Proposed Amendment to Constitution:

Your Reference Committee presents an amendment to the Constitution, introduced by the Council. This amendment places the immediate past president on the Council for the period of one year. Your Reference Committee recommends the adoption of this amendment, because we think that the experience gained by the president while visiting every component county society in the State of California is of invaluable aid in the solution of problems which may develop in the subsequent year.

This amendment cannot be finally passed until the next annual meeting of the House of Delegates.

The amendment reads as follows:

Resolved, That Section 1 of Article VII of the Constitution of this Association be and is hereby amended by inserting in the first paragraph thereof after the words "the president" the following:

"The past president"; and, be it further

Resolved, That Section 8 of Article VII of the Constitution of this Association be and is hereby amended by inserting after the words "the president" the following:

"The past president"; and, be it further

Resolved, That Section 1 of Article X of the Constitution of this Association be and is hereby amended by inserting after the words "a president" the following:

"A past president"; and, be it further

Resolved, That Section 2 of said Article X of the Constitution of this Association and the title thereto be amended to read as follows:

"Section 2—President-Elect, when and how elected; term of office. Past president.

"The House of Delegates at the regular annual session thereof shall elect the president-elect to serve until the adjournment of the final meeting of the House of Delegates at its next regular annual session. At the conclusion of the final meeting of the House of Delegates at its next regular annual session, such president-elect shall assume the office of president, and serve as such for the term of one year thereafter, or until his successor assumes office.

"At the expiration of his term of office the president shall become the past president and serve as such for a term of one year thereafter, or until his successor assumes office"; and, be it further

Resolved, That Section 4 of Article X of the Constitution of this Association be and is hereby amended by inserting in the first paragraph thereof after the word "president" the following:

"Past president."

County Hospitals.—The report concerning county hospitals is of such vital interest, and entails so much thought and judicious action that the Reference Committee does not feel that it is wise enough to make any particular comment, except that the Council continue to exert its best efforts in whatever manner it sees fit, even though it entails unexpected expenditures. We believe that every member of the House of Delegates who is alive to this problem, well explained by Mr. Siemon at the Monday evening meeting in a lengthy and comprehensive digest in its several phases, will support the Council in its activities in this regard.

Hospital Insurance.—Your Reference Committee approves the activities of the Council in regard to the hospital insurance problem. This phase of projected socialization, involving as it does so many schemes promoted by laymen at the expense of our profession, requires diligent and comprehensive consideration on the part of the medical profession. In order to solve the problem we feel that a plan should be presented which would not only make x-ray and laboratory functions those of a doctor, but would explain how he is to be paid. We recommend that the Council work out a plan or plans with the coöperation of the hospital and the specialists concerned. We approve of the Council's desire to have a fundamental plan which would be workable in its main tenets in all counties. However, we also realize that a problem in one county may not be applicable to another county. This may be because of the difference in the geographic location, the political situation at the moment, the resources of the people of the county and the energy of the individual medical members of that county in upholding the standards of the State Medical Association.

Committee on San Diego Exposition Exhibits.—Every thinking observer of the medical exhibit at the Exposition realizes the educational value to the layman of what the doctor is trying to do in his professional activities for the sick. The Council is to be especially commended for this display. Your Reference Committee feels that the individual members of the committee who were appointed by the Council to make this display possible, should not suffer financial hardship because of the duties which they have so faithfully performed. It is understood that the Exposition will probably repay the committee for its expenses. If, however, there is a failure in this regard, this Reference Committee recommends that the California Medical Association repay these members for their expenses. The Reference Committee further recommends that the Council continue to show increasing interest in scientific exhibits to be used at meetings and expositions.

Committee on Scientific Sections.—The Reference Committee recommends that further time be allotted to formulate a more satisfactory arrangement for the annual program, looking toward consolidation of section meetings, at the same time permitting each specialty to have an organization to preserve its entity. The general sections should have the advantage of hearing their technical papers.

Report of the Speaker of the House of Delegates.—We compliment the Speaker on the dignified manner in which he presides. "The gavel is used sparingly and the gavel is used impartially, but when occasion arises, the gavel is used with authority." We recommend that the gavel be presented to the Speaker at the termination of his office as a token of our esteem. We recommend also that the previous speaker be presented with a similar token of our appreciation.

Report of the Secretary-Treasurer.—We believe that our organization is fortunate in having procured the services of a nationally known man who is not only an outstanding physician, but is also a distinguished secretary. Through his efforts the business of the Association has been organized to meet the ever-increasing demands, resulting in greater efficiency and economy.

The committee reviews with alarm the rapidity with which our financial resources have been depleted in carrying out the instructions of the House of Delegates during the past two years. We would again call your attention to the fact that the Council has been compelled to dispense rapidly our funds to comply with the action of the House of Delegates.

Report of the Editor.—Our official journal is continuing its high standard and remains one of the best state medical publications of the nation. The editor has frankly stated that it is unfair for the Association to impound all papers given at the annual meeting, necessarily delaying the publishing of the selected papers from one to two years. There are forty-five papers remaining unpublished from the last annual meeting. The Reference Committee therefore recommends that the editor be allowed to enlarge his journal to sufficient proportions to allow publication.

Report of the Legal Department.—The report of the Legal Department is comprehensive, and entails problems of importance in safeguarding the practice of medicine in our state. We are unable to criticize in a legal manner any of the activities concerned in this report. We feel assured that the same energy and interest will be continued. We congratulate our Legal Department on its past year's endeavor.

Report of the Councilors.—These reports, as presented in the Pre-Convention Bulletin, should be thoroughly studied by the delegates in order to realize the immense amount of unselfish devotion these men have given in performing their duties.

Report of the Woman's Auxiliary. — The Woman's Auxiliary in its activities is one of the important adjuncts of our organization. This is especially true in the larger cities where concerted action and coördinated activities can be accomplished. Each succeeding year proves to us the importance of our coöperation and encouragement. They stand ready to help in any deleterious problem that affects the practice of medicine and the Reference Committee is happy to endorse all of their activities.

Committee on Health and Public Instruction.—Your Reference Committee endorses the work that has been carried on by this important committee and hopes the financial condition of the Association in the future will be such that their program can be enlarged and enhanced.

Report of the Committee on History and Obituaries.—We are grieved to know that thirty-seven of our fellow members have passed from us during the year. The Reference Committee asks that the members of the House of Delegates arise as a mark of respect to those who have died. We commend the committee for initiating a plan for the collection and preservation of medical history throughout the state.

We recommend to the House of Delegates that the secretary arrange for a suitable memorial tribute at the first general session of each annual meeting.

Report of the Committee on Hospitals, Dispensaries and Clinics.—We note that this committee reports that their work has been covered by the Public Relations Committee. We recommend this continued association.

Report of the Committee on Industrial Practice.—This is an important committee and the recommendations which they are offering to the House of Delegates should be carefully studied. The committee must continue unhampered in its activities relating to industrial practice.

Report of the Committee on Medical Defense.—This committee has presented a comprehensive survey for the California Medical Association. The conclusion is that it would cost us as much or more to underwrite our own company as to continue with the existent arrangements. In consideration of the present policies with private companies, it seems logical to continue without change. However, with the information at hand the committee should be vigilant to detect unsatisfactory changes in the policies or premiums, with the thought that we can always establish our own coverage satisfactorily to all concerned and with a tendency to be nearer the non-revocable insurance than in the present form.

Report of the Committee on Membership and Organization.—We approve the findings of the executive group of this committee.

Report of the Committee on Postgraduate Activities.—The importance of this committee has been felt in several smaller communities throughout the state. The present chairman has offered many suggestions to the speakers which are making the meetings more practical. We recommend the continuance of this activity.

Report of the Committee on Public Policy and Legislation.—Public policy and legislation, as handled by the committee, remains the keystone of our profession in California. We cannot conceive of any one who can give other than constructive criticism when one realizes the problems that must be solved in diverse manners and unusual ways. We are sure that every member of our Association is grateful, and that a large percentage do not realize the sacrifice of time, money and health, in trying to protect our profession against the inroads directed against the best interests of the public's health and against the California Medical Association. We should assure this committee that we stand ready individually and collectively to answer any call for help.

Report of the Committee on Scientific Work.—The recommendations as outlined in this committee's report have already been dealt with in the report of the Council.

Report of the Committee on Public Relations.—A study of this report will demonstrate its wide scope and importance. The recommendations with which they conclude their report should be studied and action taken. The Reference Committee feels that the recommendations made have been, in a large extent, carried out in the larger centers. We are certain that much has been accomplished, and that more will have to be done. Your Reference Committee commends wholeheartedly this report.

Report of the Committee on Medical Education.—In view of the fact that the American Medical Association and the American Federation of Medical Colleges have created established standards to be met by institutions in order to qualify as acceptable for medical and intern training, your Reference Committee sees no reason why the state committee should be burdened with these duties which are now being discharged by the central organization.

Report of Committee on Budget.—The budget having been approved, in concurrence with the provision of the Constitution and By-Laws, by the committee and the Executive Committee of the Council, your Reference Committee recommends that it be approved and adopted.

Report of the Committee of Five.—The Reference Committee is not making any comments upon the report of the Committee of Five, in view of the fact that the Council has declared its position, which will be given to the House tonight.

The Committee of Six.—The work of the Committee of Six is done. It has performed the duty which was assigned to it at Yosemite. We recommend that the committee be discharged.

Report of the Committee on Tax-Supported Hospitals.—The Association appreciates the vast amount of work and time that have been devoted to this most important problem of the Association. We commend its contribution in affording us a better understanding of the situation which will be extremely helpful in solving the problems when they appear, probably in the fall elections. We approve the comment of the Council, which is as follows: "The Council believes that this initiative contains the seeds of the most dangerous and fundamental changes in the practice of medicine ever presented to us and urges that every facility be granted to oppose this initiative and that every effort be put forth by the physicians of California to prevent this proposed ruin of medical practice."

Cancer Commission. — The résumé, appearing in a printed pamphlet, summarizes the labor of this commission for the past two years. It is a distinct contribution to our profession. We heartily recommend that the Cancer Commission devote its efforts, by meetings and scientific exhibits, toward the education of the doctors in the smaller communities on the subject of cancer.

Report of the Committee on Scientific Exhibits.—The scientific program as evidenced by exhibits has been gaining in importance each year. Greater emphasis should be given the work of the Committee on Scientific Exhibits. The committee should strive to increase the scope of its work, to the end that the exhibits will replace numerous formal discourses. The subjects should be presented as exhibits with the same recognition and privilege of publication as is accorded to scientific papers. This may help to solve the problem of the unpublished papers and aid in concentrating the program into fewer sections.

Report of the Committee on Scientific Sections.—This committee can convene with the Committee on Scientific Exhibits. Their coöperative effort will concentrate our numerous sections, permitting more unity in the various branches at our annual meeting. The Council and secretary may eliminate the necessity for space for the smaller sections at each annual meeting.

* * *

This meeting at Coronado will long be remembered as one of great educational value, important business accomplishment and enjoyable good fellowship. This House of Delegates tenders its sincere thanks to the Committee on Arrangements for its well conducted efforts which have made this possible.

Respectfully submitted,
E. ERIC LARSON (Chairman),
ALFRED L. PHILLIPS,
NATHAN G. HALE.

* * *

Report of Reference Committee No. 1.—The chairman of the committee read each section of the foregoing report. Motions were duly made and seconded that each section be adopted. At the conclusion of the report, the chairman of the committee moved that the report be adopted as a whole. This motion was seconded and carried.

* * *

Reference Committee No. 2: On New and Miscellaneous Business and Resolutions

THE SPEAKER: The chair recognizes Dr. Daniel Crosby, chairman of the Committee on Resolutions.

* * *

DOCTOR CROSBY: We have numbered these resolutions in the manner in which they were received, and I shall read No. 1 first.

Resolution No. 1: On Hospital Insurance; Exclusive of Medical Services

WHEREAS, Certain proponents of hospital insurance schemes have made misleading statements regarding the attitude of the California Medical Association towards certain aspects of health and hospital insurance; and

WHEREAS, Such statements are entirely unwarranted and unfounded, and would seem to be intentionally misleading; now, therefore be it

Resolved, That this House of Delegates reaffirms its belief in and endorses the policies established by the 1935 House of Delegates, by the Council and by the Department of Public Relations of the California Medical Association on matters pertaining to hospital service insurance; and be it further

Resolved, That radiology and pathology being in all of their several parts and subdivisions the practice of medicine, shall be excluded in their entirety from the benefits included in hospital service policies.

Your committee thought it advisable to modify the text of this resolution as follows:

WHEREAS, Misleading statements have appeared and uncertainty appears to exist regarding the attitude of the House of Delegates, the Council of the California Medical Association and the California Medical Association toward certain aspects of hospital insurance; and

WHEREAS, It is deemed advisable to reiterate and emphasize the position of the House of Delegates, the Council and the California Medical Association; therefore be it

Resolved, That this House of Delegates reaffirms its belief in and endorses the policies established by the 1935 House of Delegates, by the Council and by the Department of Public Relations of the California Medical Association on matters pertaining to hospital service insurance; and, be it further

Resolved, That radiology and pathology, being in all of their several parts and subdivisions the practice of medicine, shall be excluded as such from the service benefits of hospital service policies.

In this form, Mr. Speaker, the committee recommends its adoption.

THE SPEAKER: The question is upon the adoption of the substitute resolution. Is there any debate?

The Speaker recognizes Doctor Wilson of Los Angeles.

DOCTOR WILSON: I had hoped that we all understood the principles involved in attempting to sell professional services as a part of the hospital insurance certificate, as we seemed to have fought that issue out at Riverside. The committee's modification of the original resolution in using technical evasion providing for means of reimbursement for professional services is going to lay us open to the fact that when certificates are offered to the public by solicitors, and through advertisements and the beneficiaries who provide a professional service, the radiologists and pathologists will definitely open the way to selling professional services by solicitation and advertising, and will violate the code of ethics. It seems to me that an adherence to a definite separation of professional services and hospital services must be maintained, and that any attempt to evade the issue is going to lead us directly into the most outrageous, cut-throat competition in the practice of medicine that will not only follow for payment of the radiologists, the pathologists and laboratory services, but will extend all the way down the line, whether the certificate be sold by a corporation, insurance company or any little outcast hospital group; and when the California Medical Association approves the principle whereby professional services may be compensated for as the result of solicitation, we have opened the door to that type of competition in all directions. (Applause.)

THE SPEAKER: Is there further debate on this subject?

DOCTOR GIBBONS (San Francisco): I ask that we hear from Mr. Peart on this subject.

MR. PEART: The report of the committee in recognizing that cash benefits may be paid to the patient for the cost of these professional services is, I think, a legal disposition of the question. The point made by Doctor Wilson is that, ethically, the service should not be sold in that manner. Some time ago, a few weeks I think, we wrote a letter to a roentgenologist of Sacramento, Doctor Graham, in which we expressed the view of the Council that cash payments and cash indemnities for these services paid to the patient were approved by the Council. I do not think we have that letter with us, but it was carefully read to the Council and its approval was obtained before the letter was sent. The question, however, is one of ethics. If the Association decides as Doctor Wilson argues, then, as Alameda County has determined, no professional services whatever will be included. It is perfectly legal, I think, to include them as reported by the committee. Solicitation, legally, is not involved under a decision of the District Court of Appeal, but, ethically, that is your determination and not mine.

DOCTOR ULLMANN (Santa Barbara): I think it would be wise for us to use the same terms that we used in the Council meeting in regard to this, or the term "reimbursement" instead of "cash benefits paid to the patient." If I remember, Mr. Peart at that time said it was legal to reimburse policy holders for money expended, that is, losses, and that in this particular type of reimbursement they could only receive it on the presentation of a paid or receipted bill.

THE SPEAKER: Is there further debate? If not, the question is on the adoption of the amended resolution.

THE SPEAKER: Doctor Kelly of San Francisco.

DOCTOR KELLY: I think I have had my neck out as far as anyone in this whole business and I think we should spend just a minute looking at this problem and the result of this resolution as it will affect possible hospitalization plans evolved either by county medical societies or by hospitals. If we limit this at the present time to no such services in any policy in any plan which will get our approval, we may delay the development of plans which are under way in certain parts of the state. I think we ought to consider for a minute just what this reimbursement to patients for the cost of these services means, and consider just how it is going to result in ruthless solicitation and debasement of practice. The question that was decided on was that of a policy considered by the Inter-Coast, in which they said they would provide cash indemnities for the cost of x-ray and laboratory services. The patient who was to buy the policy had free choice of as many hospitals, I think, as Inter-Coast could sign up in the neighborhood, and he had free choice of roentgenologists, as far as free choice of roentgenologists can be had. One has free choice of hospitals in a big community or a more limited choice in a small community. In the matter of a plan which might provide service anywhere in the state for a policy holder, the free choice of physicians, roentgenologists and clinical pathologists involved here would be fairly broad. The fact that the roentgenologist or the clinical pathologist was in the hospital which the patient chose would limit the choice to that extent only. The Pacific Employers, as we all know, issued a policy a while back in which it was going to indemnify the patient for medical services rendered, but the policy provided that only certain doctors could perform these services if the patient was to be indemnified. The Appellate Court held that that was in effect the practice of medicine, because in the application for the policy the patient signed an agreement making the company his agent to pay the money to the doctor. In that kind of policy, unquestionably everything Doctor Wilson suggests would happen and would happen in the worst way. The Pacific Employers did not follow that case through. It left it in the Appellate Court and is now putting out sample policies at least, which provide for straight cash indemnification up to specified amounts in the policy, to any doctor that the patient may choose to have to take care of him, provided only that the doctor be a member of the county society in the county in which the service is rendered.

I think we should consider what our attitude would be toward a policy like that. We do not have to approve any plan unless the provisions of that plan suit us, but it would seem to me, in fairness to some of the hospitals that are trying to get along and have to sell these policies in competition with lay groups, that we might leave the door open on this one business, provided that every plan that comes up for approval by the state society be required to have that type of free choice of physician in it. I am not so sure that we ought to limit ourselves fixedly to absolutely no provision for any kind of care of this type in a policy because it may be, one of these days, that one of the companies or one of the county organizations will find that it has to include some consideration for those services. I have a feeling somehow that if we only approve the right plan we may let them do that, still approve the plan and still not have the professional suffer.

The Speaker: Doctor Goin of Los Angeles.

Doctor Goin: I think that the purpose of this resolution is not to close the door to some proper method of including some degree of medical care with hospitalization insurance plans. The purpose of the resolution is primarily to answer certain persons who have publicly stated in printed and written material that the California Medical Association has never spoken on these matters, and who take the utterances that the California Medical Association has made and wheezeled them into things they were never meant to say. Therefore, this resolution was prepared with some attention to its detail, so that it will be practically impossible for any honest person to say that the California Medical Association has not pronounced authoritatively on these matters which are in question.

If we do not include in this resolution a clause which provides specifically for indemnification, we have not particularly closed the door to indemnification. We have simply left the matter in suspense, and indemnification can, if desirable, be arranged with hospital service insurance corporations or other corporations which show a disposition to write a decent policy and not to include medical care in it. I will remind you that you leave the door open this way by including the last clause proposed by the Reference Committee, and that we could just as well add a clause saying that the patients should be indemnified for appendectomies, obstetrics, etc. I do not see how we can differentiate between one medical branch and another. To eliminate this last clause will not weaken the hospital's position when it attempts to sell hospitalization insurance. I wish all of you could have heard Doctor Kelly when he defined hospital service as consisting in the bedding, the boarding and the washing of patients, and the performance of such things as could not be performed in a doctor's office. If we insist on those things and stand firm that hospitalization does not include medical service in any form, perhaps we will survive as practitioners of medicine.

Mr. Speaker, in behalf of the Los Angeles delegation, I move the amendment of the resolution as presented by the committee by the deletion of its last paragraph. (Applause.)

Doctor Askey: I second the motion.

Doctor Crosby: I suspect that the doctor did not mean to delete all of the last paragraph. I suspect that he meant to delete the last two lines, "except that lawful reimbursement to the patient for the cost to him of such service may be provided."

Doctor Goin: May I change my motion then, I having misunderstood the punctuation, to have it exclude that portion of the amendment beginning with the words, "except that," namely, exclude the last two lines?

The Speaker: The question is on the amendment to the substitute resolution, deleting the portion mentioned by Doctor Goin. If there is no further debate, all those in favor will say, "aye." The motion was regularly carried.

The Speaker: The question now is on the substitute resolution as amended. All those in favor will say, "aye." The substitute resolution was adopted as amended.

* * *

Doctor Crosby: The second resolution reads as follows:

Resolution No. 2: Concerning County Hospitals

Whereas, The report of the Committee on Tax-Supported Hospitals has shown conditions existing which make it the most serious problem confronting the medical profession of our state today, and since there are now being circulated petitions for an initiative law to open the county hospitals to all citizens, rich and poor alike, and since the proponents of this measure are committed to a program which apparently intends to include medical service with hospitalization, and since the proposed initiative law would confer such broad powers on the County Boards of Supervisors, that it threatens to bring upon us a form of socialized medical and hospital service which will ultimately be as unsatisfactory to the public as it will be unfair and unjust to the members of the medical profession of California; and

Whereas, It seems essential that a definite and acceptable agreement as to the proper function of a county hospital in relation to the profession be consummated; and

Whereas, The committee has prepared and presented a report which it believes represents to the best of its ability the situation which exists in this state, and since there has been no thought of alarming needlessly the members of this organization, but on the contrary, the committee feels that enough warning cannot be given concerning the gravity of the situation and since it is felt that it is imperative that a policy be developed in each component society which shall be uniform throughout the state in order that no one county shall adhere to a policy detrimental to another county or to the rest of the state; and

Whereas, The committee believes that grave disaster can be averted or its own interests advanced only by the highest degree of organization and the utilization of every facility at its command, and since we also believe that it is humanly impossible for any small group such as the members of this committee to function sufficiently often and continuously enough to be thoroughly efficient in so grave a situation, and knowing that this work must be done and well done if we are to succeed, therefore the committee requests that the following resolution be accepted and presented to the House of Delegates without prejudice or recommendation; therefore be it

Resolved: First, That the House of Delegates express its approval of the plan to place all hospitals in California under a central state board according to the plan proposed in recommendation number two in the committee report;

Second, That the House of Delegates approve the suggestion that each component society make a serious effort to correct any faults that may lie within its own ranks;

Third, That the president of the California Medical Association shall appoint a committee of six, three of whom shall be members of the standing committee on Public Policy and Legislation, together with three other members of the C. M. A. to continue the work of the reporting committee;

Fourth, That the Council of the California Medical Association shall be empowered to appropriate such funds and to employ such personnel as may, in their judgment, be necessary to effect a satisfactory solution of the county hospital problem;

Fifth, It shall be the duty of this committee to direct the effort of the C. M. A. to defeat the proposed initiative and to develop a unified county hospital program in the component societies that this committee shall report to the House of Delegates at its next annual meeting.

Doctor Crosby: After conference with the committee that submitted this resolution, it was decided to divide the resolution into two parts, one part to be presented with the recommendation of the committee for passing, and one portion to be submitted to the House without comment. The modified resolution No. 2 is as follows:

Whereas, The report of the Committee on Tax-Supported Hospitals has shown conditions existing which constitute the most serious problem confronting the public and medical profession of our state today with the present circulation of petitions for an initiative law to open the county hospitals to all citizens, rich and poor alike, and with the proponents of this measure committed to a program which apparently intends to include medical service with hospitalization and the conference of such broad powers upon the county boards of supervisors, that it threatens to bring upon us a form of socialized medical and hospital service which will ultimately be unsafe and inadequate for the public; and

Whereas, It seems essential that a definite and acceptable determination as to the proper function of a county hospital in relation to the public and the profession be consummated; and

Whereas, The committee has prepared and presented a report which it believes represents the situation which exists in this state, it is felt that it is imperative that a policy be developed in each component society which shall be uniform throughout the state in order that no one county shall adhere to a policy detrimental to another county or to the rest of the state; and

Whereas, The committee believes that grave disaster to the public can be averted by the proper dissemination of information pertinent to this subject, supported by the active interest and coöperation of the California Medical Association and every physician of California as a citizen; therefore be it

Resolved: First, That the House of Delegates recommends that each component society make a serious effort to correct any faults that may lie within its own jurisdiction.

Second, That the president of the California Medical Association shall appoint a committee of six, three of whom shall be members of the standing committee on Public Policy and Legislation, together with three other members of the California Medical Association, to make additional study of this question and to report from time to time to the Council.

Third, That the Council of the California Medical Association shall be empowered to appropriate such funds and to employ such personnel and take such action as may, in their judgment, be necessary to effect a satisfactory solution of the county hospital problem.

* * *

Doctor Crosby: At the request of the committee on Tax-Supported Hospitals your Reference Committee submits, without recommendation, the second portion of amended Resolution No. 2.

Be It Resolved, That the House of Delegates express its approval of the plan to place all hospitals in California under a control state board, according to the plan proposed in a portion of Recommendation No. 2 in the committee's report, which reads as follows:

"Since our present laws vest the supreme control over county hospitals in boards of supervisors composed of lay individuals, ignorant usually of hospital needs and management, and who often use this control to gain political power, and considering further that making a political football out of the county hospitals has in several counties resulted in inadequate care of the sick entitled to proper care at the county hospital, it is unanimously agreed that to remedy this situation it is necessary to eliminate politics and the present method of control by supervisors. Your committee, therefore, unreservedly recommends that an attempt be made to secure centralized control of all hospitals in the state. We recommend that a state control board be given the authority to regulate hospitals, and that each county operate under an advisory board appointed by and subject to the state board. This can be accomplished by amending the present public health law, vesting hospital control in the existing State Board of Health, thereby avoiding the creation of a new department or board.

"It is further recommended that (*a*) the details of such a plan be worked out by the Council of the California Medical Association and its Legislative Committee; (*b*) it be left to the discretion of the House of Delegates whether the attempt be made through the legislature or by an initiative act; (*c*) that this matter should be given preference and first consideration by the Council and House of Delegates over other legislative and initiative problems."

This, Mr. Speaker, is placed before you without recommendation.

The Speaker: It is placed before the House.

Doctor Wilson: If it is in order, Mr. Speaker, I move the tabling of this matter.

The matter was tabled.

Doctor Crosby: The third resolution follows.

Resolution No. 3: Regarding Payment for Hospital and Medical Services When Rendered in Automobile Accidents

Whereas, In the past, doctors and hospitals throughout California have rendered medical care to persons injured in automobile accidents, said persons being protected by public liability insurance and said injured persons having recovered damages and subsequently failed to reimburse the doctor and/or hospital; and

Whereas, The legal "set-up" at the present time offers no protection to doctors and/or hospitals against such practices; and

Whereas, Other states have adopted measures to protect doctors and hospitals under similar circumstances; now, therefore be it

Resolved, That the Council of the California Medical Association be instructed to take such necessary legal and/or legislative action to bring about protection to the doctors and hospitals of California under such circumstances.

Your committee, retaining the intent of the resolution, is offering a substitute resolution which differs merely in wording. It is:

Whereas, In the past, doctors and hospitals throughout California have rendered medical care to persons injured in automobile and other accidents, certain of whom are protected by pubic liability insurance and have recovered damages and subsequently failed to discharge their financial obligations incident to the accident; and

Whereas, The legal "set-up" at the present time offers no protection to doctors and/or hospitals against such practices; and

Whereas, Other states have adopted measures to protect doctors and hospitals under similar circumstances; now, therefore be it

Resolved, That the Council of the California Medical Association be instructed to take such necessary legal and/or legislative action to bring about protection to the doctors and hospitals of California under such circumstances.

Your committee moves the passage of this resolution.

The motion was seconded and the resolution adopted without debate.

* * *

Doctor Crosby: In regard to Resolution No. 4, which reads:

Resolution No. 4: Concerning the Use of the Name of the California Medical Association in Connection with Proposed Legislation

Resolved, By the House of Delegates, that members of the California Medical Association are instructed not to submit proposed laws to the State Legislature, using in connection therewith the name of the California Medical Association or any of the component county societies or branches, unless such proposed articles shall have received the general approval, first, of the proper component county medical society, and, in addition, the approval of the California Medical Association (through one of its constituted bodies in authority, viz., the C. M. A. House of Delegates, the Council or Executive Committee) before being passed on to the Legislative Committee of the California Medical Association for introduction to the State Legislature; and, be it further

Resolved, That when proposed laws are introduced before the California Legislature, without the above general procedure having been observed, then the C. M. A. Committee on Public Policy and Legislation shall be under no obligation to give the same its support, until, through mail or other vote of one of the properly constituted authoritative bodies of the C. M. A., it shall have first learned the wishes of the State Medical Association in regard thereto.

Again a modification of wording in amended resolution No. 4.

Resolution No. 4: Resolution on Procedure in Presenting Proposed Laws to the Legislature.

Resolved, By the House of Delegates, that members of the California Medical Association are instructed not to submit proposed laws to the State Legislature, using in connection therewith the name of the California Medical Association or any of the component county societies or branches, unless such proposed articles shall have received the general approval, first, of the proper component county medical society, and, in addition, the approval of the California Medical Association (through one of its constituted bodies in authority, viz., the House of Delegates, the Council or Executive Committee) before being passed on to the Legislative Committee of the California Medical

Association for introduction to the State Legislature; and, be it further

Resolved, That when proposed laws are introduced before the California Legislature, without the above general procedure having been observed, then the Committee on Public Policy and Legislation shall be under no obligation to give the same its support.

Mr. Chairman, we move the adoption of the modified wording of this resolution.

Motion seconded by Doctor Gibson.

Dr. Junius Harris: I move to strike out the first "California Medical Association and county societies," using the name of the State C. M. A. and county society. We do not submit these laws using the names. Please re-read.

Doctor Crosby: Resolved, by the House of Delegates, that members of the California Medical Association are instructed not to submit proposed laws to the State Legislature, using in connection therewith the name of the California Medical Association.

Doctor Harris: Now, that should be deleted.

Doctor Crosby: . . . or any of the component county societies or branches. . . .

Doctor Harris: Now, second. The rest is all right.

Doctor Crosby: . . . unless such proposed articles shall have received the general approval.

The Speaker: Will the seconder accept that amendment? He does. Is there any discussion on this? It is moved and seconded that the substitute resolution as presented by the committee be adopted. All those in favor say aye.

The amendment was accepted as read.

* * *

Doctor Crosby: Resolution No. 5.

The Anesthesiology Section of the California Medical Association respectfully submits:

Resolution No. 5: Regarding the Practice of Anesthesia as a Medical Service

Whereas, A decision of the California State Supreme Court affirmed the decision of the Superior Court in and of the County of Los Angeles that the practice of nurse anesthesia under the immediate direction and supervision of the operating surgeon is not a violation of the State Medical Practice Act; now, therefore be it

Resolved, That the House of Delegates instruct the Council to take all advisable and necessary action to protect the practice of anesthesia in California from lay invasion by technicians, and to consult with the State Board of Medical Examiners, to protect the ruling of the State Board of Medical Examiners authorized on February 27, 1928.

This resolution is modified in wording and the Anesthetic Section of the California Medical Association respectfully submits amended Resolution No. 5.

Whereas, A decision of the California State Supreme Court affirmed the decision of the Superior Court in and of the County of Los Angeles that the practice of nurse anesthesia under the immediate direction and supervision of the operating surgeon is not a violation of the State Medical Practice Act; now, therefore be it

Resolved, That the House of Delegates instruct the Council to take all advisable and necessary action to protect the practice of anesthesia in California from lay invasion by technicians.

Doctor Crosby: With this wording, the committee, Mr. Speaker, moves that the resolution pass. . . .

The Speaker: Doctor Adams seconds the substitute resolution.

Doctor Chalmers-Francis is recognized.

Doctor Chalmers-Francis: Mr. Speaker and honorable delegates of the California Medical Association: You all heard the report of the Council of the California Medical Association. It therefore is not necessary for me to remind you that the decision of the Supreme Court was based on the evidence which was produced on behalf of nurse anesthesia. The resolution I ask your permission to withdraw, because the action already taken by the Council is entirely satisfactory to the Anesthetic Section of the State of California.

The Speaker: This resolution is regularly before the House. It can be withdrawn, however, by the consent of the mover and the seconder.

The resolution was withdrawn.

Doctor Crosby: Resolution No. 6. We're getting pretty close to the end. (Applause.)

* * *

Resolution No. 6: On Malignancy in Relation to Industrial Insurance

Resolved, That the Council of the California Medical Association be instructed to institute a study of the relation between trauma and malignancy and, if deemed advisable, to initiate legislative changes in the Workmen's Compensation Law establishing a tribunal of surgeons and pathologists adequately trained and experienced in the diagnosis of malignant disease, to which all industrial cases in question shall be referred for determination as to the relationship of the trauma to the malignancy.

The passage of this we move without modification.

The motion was seconded and duly adopted.

Doctor Crosby: Resolution No. 7.

* * *

Resolution No. 7: On Practice of Medicine by Corporations

Resolved, That the Council of the California Medical Association be instructed to institute proper legal action against a member or members of the California Medical Association who are or may be aiding and abetting corporations practicing medicine in violation of existing laws.

We have seen fit to change the wording on advice. The committee does not recommend the adoption of this resolution for the following reason:

The purpose is to procure an effective court ruling against a corporation practicing medicine, and to proceed under the terms of the resolution would result, inevitably, in the injury of the member. If successful under the resolution as proposed, the State Board of Medical Examiners would have no alternative but to deprive the member involved of his license.

In failing to recommend the passage of this resolution, your committee is offering this as a substitute:

Resolved, That the Council of the California Medical Association be, and it is hereby instructed to cause such proper legal action to be instituted as shall, in its opinion, be necessary to terminate the practice of medicine by corporations contrary to law.

The motion was seconded.

The Speaker: It has been moved and seconded that the substitute resolution that you have just heard be adopted. Is there debate on it? If you gentlemen will pardon the Speaker, do you realize that this commits us to legal action? Just so that you will understand it, I will read it again.

The Speaker reread resolution.

Mr. Peart, I would like to know what that means.

Mr. Peart: Well, it means the selection of such remedies as may be available. It means court proceedings. If the Council on a survey which we would make determined to institute those proceedings, we would probably have to introduce a number of them, because it is already established in California that a corporation cannot lawfully practice medicine. It has been established in the case of the Pacific Employers' Insurance Company against the Insurance Commission. Now, just what remedies would be evoked, of course, I'd like to study. They might be criminal or they might be civil.

The Speaker: Doctor Wilson.

Doctor Wilson: Mr. Speaker, does the question refer to the legal counsel or to the Council of the C. M. A.?

The Speaker: "The Council of the California Medical Association is hereby instructed to cause proper legal action to be instituted." That is, in its discretion. " . . . as shall in its opinion be necessary to terminate the practice."

Doctor Wilson: So that the quantity and number and so on would be entirely up to the Council as conditions exist. I think that would be quite safe.

The Speaker: I just wanted the House to understand. We have gone into a good many things, causing a good deal of expense, and we should know what we are authorizing.

Doctor Wilson: Mr. Speaker: Is it mandatory that the Council begin action wherever they find such practice obtaining?

The Speaker: " . . . if, in its opinion." There is the saving clause. Doctor Crosby, read it again, please.

Doctor Crosby reread resolution.

Doctor Howson: Mr. Speaker, I should like to ask Mr. Peart, our legal counsel, if this is not mandatory.

Mr. Peart: I think it is, and that is was so intended.

Doctor Howson: You mean that the sponsors of the resolution desired that it be mandatory?

Mr. Peart: Yes.

Doctor Howson: That means then, that the Council can begin action on a great many different cases at one time, and it is not whether, in the opinion of the Council, action should be begun, but the means by which this should be accomplished.

The Speaker: Doctor Kelly.

Doctor Kelly: I am afraid of this kind of resolution. The Council has been fooling around wherever it could with the slim means available to it to start proceedings of this kind. As Mr. Peart just said, it has already been decided that the practice of medicine by corporations in the State of California is not proper, it is illegal. It means going after every corporation that we find practicing medicine at the present time, and just chasing them down, one by one, through a series of court decisions for each one, and if, in our opinion, that is the legal advice which we get on the way to do it, that resolution pins us down to going ahead and doing it. Now, $15 will be slim dues if we get to going in every county in the state, trying to close up all the hospitals that are paying a roentgenologist a salary at the present time, all of the corporations that are trying to sell life insurance, all of the industrial accident insurance people and corporations that have employees' medical services that are not quite inside of the law, and then wrestling around this hall with the county hospital initiative, and we will run a fair chance of having no money by Christmas. I think that in order to leave us a little leeway here for the next year, and save money so that it does not go out on the basis that we were told to do this by the House of Delegates, it had better be put as a discretionary phrase.

The Speaker: Doctor Crosby.

Doctor Crosby: When I was a young fellow practicing medicine, I was trying one time to modify the feeding of a little Portuguese baby, and I gave the family instructions in Portuguese, of which I could speak a little, and I told them what to do. The mother understood it and listened to it and paid attention. The father said to me, "Mr. Doc, how much it cost?" I did a little mental arithmetic, and I told him how much it would cost and he said: "But, Doc, that damn kid ain't never going to pay expenses." (Laughter.)

The Speaker: Doctor Chandler has the floor.

Doctor Chandler: The San Francisco delegation introduced that resolution by instructions of its Board of Directors with this in mind. I might say that the resolution was written before the present status of the Los Angeles anesthesia case was established. We had been informed by more than one person that certain hospital insurance service corporations are looking for a test case to take into court and have a legal opinion rendered, or a decision rendered which will establish legally what constitutes hospitalization, which most of us think would be an undesirable decision or an undesirable question to present to a court for a decision at this time. This resolution was put in with the intention that it would be mandatory upon the Council to do something that would bring about a decision on what constitutes—no—that it would make it mandatory on the Council to stop the practice of medicine by corporations when that has been already established by law, or by court action. Now, I appreciate that making it mandatory upon the Council to do something, and leaving it to their discretion as to the method they use in doing that something, will cost money and may involve a good deal of time, effort and expense. On the other hand, it was also our opinion on advice (I am not real sure now where we got the advice, but at the time, at least, we thought it was good advice), that all this legal proceeding could be brought about by the Board of Medical Examiners in prosecuting people who are illegally practicing medicine, that it would not necessarily be an expense and the direct action by the Council of the California Medical Association, but upon their request or instigation the State Board of Medical Examiners could prosecute anybody who is illegally practicing medicine. I would like to have that part cleared, if it can be cleared by Mr. Peart at the present moment; and if that is not so, I think the recommendation (I don't believe Doctor Kelly made it a motion, but if he did not I think he should), that the discretion be left to the Council should be enlarged a little bit.

The Speaker: Will Mr. Peart answer the question of Doctor Chandler?

Mr. Peart: I think the question should be answered by Doctor Molony.

Dr. Molony: Gentlemen: There has been a case before the State Board of Medical Examiners, of a physician in San Francisco, or rather a case of his license, in connection with this Pacific Health Corporation, and that has been put off from time to time until after this decision had been rendered. Without a doubt, the provision of the Medical Practice Act, which provides that aiding and abetting an unlicensed practitioner is proper subject for revocation of the license of any practitioner so engaged, should satisfactorily take care of this situation. I am sure that if the medical men who are aiding and abetting an unlicensed practitioner, (which could be, of course, a corporation), they would be subject to the revocation of their license.

The Speaker: Any further discussion?

The Speaker: Doctor Wessels.

Doctor Wessels: I move that this resolution be tabled.

Motion was seconded, and the resolution was tabled.

Doctor Crosby: Resolution No. 8.

* * *

Resolution No. 8: On the Practice of Medicine by Corporations

Whereas, It is against the law of the State of California for a corporation to practice medicine; and

Whereas, It is against the principles of ethics of the California Medical Association for a member to dispose of his professional attainments or his services to any lay body, organization or group of individuals by whatever name called or however organized; and

Whereas, It is known that many corporations are practicing medicine in this state and many members of this association are selling their services to these corporations because of circumstances beyond their individual control; now therefore be it

Resolved, That the Council of the California Medical Association be and hereby is instructed to prepare, with the help of its legal counsel, a letter setting forth the legal and ethical aspects of this situation, such letter to be sent to all corporations that are known to be practicing medicine and to all members of this Association that are known to be aiding and abetting them.

After conference with the proponents of this resolution, your committee has the following substitute resolution to offer.

Whereas, Subject to certain well-defined exceptions, it is against the law of the state of California for a corporation to practice medicine; and

Whereas, It is known that many corporations are practicing medicine in this state contrary to law and many members of this Association are selling their services to these corporations; and

Whereas, Many corporations and many members of this Association are not cognizant of the legal and ethical questions involved; now therefore be it

Resolved, That the Council of the California Medical Association be, and it is hereby instructed to prepare, with the help of its legal counsel, a letter setting forth the legal and ethical aspects of this situation, and to send such letter to any corporation known or believed to be practicing medicine contrary to law and to all members of this Association.

Mr. Speaker, your committee moves the acceptance of this amended resolution.

The resolution was adopted without debate.

* * *

Doctor Crosby: This report of the Special Committee on Maternal Welfare, created by the resolution of this House at Yosemite, was inadvertently lost in the file on Monday night, and was not read to the House by the member of the committee who was to do so.

Your Reference Committee has considered the report and its recommendations, and because it considers the matter important in view of the development of maternal and child welfare plans under the Federal Social Security Act, it requests permission to read the report, and that this House act upon it.

The Speaker: It is the unanimous consent that the resolution may be introduced at this time.

Doctor Crosby read the following report:

Report of the Committee on Maternal Welfare

The Committee on Maternal Welfare reports:

(1) Through one of the members a personal investigation of the Maternal and Child Health Service of the Social Security Act was made in Washington, D.C.

This Committee recommends:

(A) That the Association endorse the plan of the Division of Maternal and Child Hygiene of the California State Board of Health, in connection with this Act.

This endorsement is predicated upon:

(1) Any change in the state plan must be submitted to this committee before becoming effective.

(2) That a systematic and widespread educational program in obstetrical problems for the general practitioner (such program to include the subjects listed below*), be instituted at once in coöperation with the California State Board of Health.

(B) That this committee be continued and be authorized to coöperate with, the California State Board of Health, subject to the approval of the Council.

RALPH J. THOMPSON.
HANS F. SCHLUTER.
T. HENSHAW KELLY.
LYLE G. McNEILE.

May 24, 1936.

Doctor Crosby: Mr. Speaker, we move the adoption of this request.

The request was granted without discussion.

* * *

Doctor Crosby: Mr. Speaker, I move you the adoption of the report of this committee as a whole as amended.

Following the usual procedure, the motion was carried and the amended report adopted as a whole.

The Speaker: Doctor Crosby and Doctor Larson, the Speaker at this time desires to express thanks, not only for himself personally, but for the entire House, for this work that your committees have done. Yours were arduous duties. (Applause.) Any man accepting service on these committees bids good-bye to the scientific sections. I know the House agrees that these delegates have done for us a fine service.

* * *

Mr. Speaker: The chair recognizes Dr. Francis Pottenger.

Doctor Pottenger: Mr. Chairman, I would like to ask unanimous consent to introduce a resolution.

The Speaker: If there be no objection, Doctor Pottenger will have the unanimous consent to introduce a resolution.

No delegates objected.

Doctor Pottenger:

Resolution No. 9: On Tuberculin Testing of California Dairy Herds

Whereas, The dairy herds of California are the most seriously infected with tuberculosis of any state in the Union; and

Whereas, Dairy products from infected herds endanger the lives of human beings; and

Whereas, The tuberculin test is recognized by physicians and veterinarians throughout the world as being an efficient method for determining the presence of tuberculosis in man and animals; and

Whereas, The tuberculin test has proven to be harmless even when given to infants and small children; and

Whereas, There is an unwarranted and hostile opposition to such test being given to cattle by certain owners of dairy herds on the ground of its being inefficient and harmful; now be it

Resolved, That the California Medical Association deplores the action of such dairymen as being unwarranted and dangerous to the health of the people of California, and urges the health and political authorities of the state to prevent the sale of milk, cream, cheese, and all other dairy products unless the cattle from which the product comes has been tuberculin tested by the proper authorities, and all infected animals removed.

I move its adoption.

The Speaker: Doctor Geiger seconds the motion.

Doctor Geiger: I would like to speak on that for a minute, if I may.

The Speaker: You may, Doctor Geiger.

Doctor Geiger: Mr. Speaker and Members of the House: This is a very important resolution. I am sorry that it has not been brought up before. This discussion, especially as to the efficacy of the tuberculin test of cattle, has been carried on in the San Joaquin Valley to the extent that the Portuguese group have been classified as being un-American and so forth. I wish to state here, however, that in a conference with the Portuguese consul in my office in San Francisco, we came to the conclusion that he would, representing the Portuguese Government, urge the tuberculin test on all Portuguese farmers. I would like to see this resolution passed as a public health measure and, with the consent of the man who produced it, I would prefer, if you will allow me to do so, to add to that resolution the words "pasteurization of milk." We are now coming face to face with one of the most insidious nonpublic health propagandas in this state in the question of pasteurization, and I think that if those words were added to it, that is, the pasteurization of the general milk supply other than certified milk, we could settle many of the problems of public health in this state in regard to milk.

The Speaker: Will Doctor Pottenger accept that? The question is on the resolution introduced by Doctor Pottenger. Is there any further discussion? . . .

Doctor Geiger: May I again ask Doctor Pottenger whether he would allow me to put in my amendment of "pasteurization of milk?"

The Speaker: Will you come to the desk, Doctor, and make the correction?

Doctor Rosson: Mr. Chairman, Doctor Rosson of Tulare.

The Speaker: Doctor Rosson of Tulare. Just a moment, Doctor Rosson. Doctor Pottenger, will you read this resolution as amended?

Doctor Pottenger: "*Resolved,* That the pasteurization of market milk is a public health measure of first magnitude."

Doctor Eusden: Should not certified milk be excepted?

Doctor Pottenger: Certified should be excepted.

Doctor Rosson: I hate to take time at this late hour, but this is a matter of great importance to Tulare County and to San Joaquin Valley, and I think I might say that the resolution is an excellent one with one minor change. The dairymen of Tulare County, a number of them, very much opposed the testing of the herds, but they were compelled to have them tested and tuberculous cattle have been taken out of the herds and destroyed, and there are more tests to be made in the future to keep the tuberculous cattle out of the herds. A great many of the Portuguese did oppose tuberculin-testing, but most of those people are glad now that it was done, because they have a better market for their milk. In regard to the pasteurization, that will work quite a hardship upon some of the dairymen of Tulare County and the San Joaquin Valley, because of the fact that there is only one dairy, as far as I know, in my part of the state that produces certified milk. Nevertheless, I think that the pasteurization of the milk, and compelling it to be pasteurized, will be an excellent thing, and that the dairymen will eventually look upon that the same way as they look upon the destroying of the tuberculous cattle. In regard to the last couple of words in the last part of the resolution, I should think that it should read not from "tested herds," but from "infected herds," because a year or so ago (up to a year ago I believe it was) the herds in Tulare County and other places were tested, but the tuberculous cattle were not destroyed and the milk continued to be sold from tuberculous herds, so I think it would be much better to have that wording "infected herds."

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* 1. Antepartum Care
2. Intrapartum or Delivery Care
3. Postpartum Care
4. Postnatal Care
5. Mechanism of Labor Normal and Abnormal.
6. Conduct of Home Labor
7. Obstetric Examination and Diagnosis
    General
    Mensuration
    Determining of Fetal Position
    Methods of Examination—abdominal, rectal, vaginal, roentgenological, laboratory.
8. Puerperal Infection
9. Toxemias
10. Obstetric Hemorrhage
11. Abortion
12. Difficult Labor
13. Forceps Delivery
14. Version
15. Other Methods of Delivery
16. Repair of Birth Injuries
17. Care of Premature Infants
18. Complications of the Neonatal Period.

Doctor Rosson: "Nontested and infected," that would seem to cover it, so that milk from infected cows could not be sold.

The Speaker: Is there any further discussion of this resolution?

Dr. Junius Harris: I would like to discuss this myself. I do not think there are enough "whereases" in Doctor Pottenger's description, and I want to add one more "whereas" to the possibility and the probability in this rather vital and important group of "whereases." You must remember that this subject has been long discussed (and I think my friend, Doctor Geiger, can remember when I was an assistant in the State Board of Health when he was there also, many years ago), and that the same problem came up in the legislative halls. The results are now showing in the State of California, by having, through the State's inaction, the greatest number of infected herds of all states in the Union. . . .

The Speaker: All those in favor of the resolution as these gentlemen have finally presented it, say "aye."

. . . The resolution was adopted as amended.

* * *

Notice of Proposed Amendment to the Constitution: On Limitation of Funds to Be Appropriated

Doctor Molony: Mr. Speaker, I ask the unanimous consent of the House to introduce notice of an amendment to the Constitution of the Association.

The Speaker: If there be no objection on the part of the House, Doctor Molony has the floor.

Doctor Molony:

Resolved, That Section 1 of Article XI of the Constitution of this Association be and it is hereby amended as follows:

By striking out all of the fourth paragraph of said Section 1 of Article XI, reading as follows:

"All resolutions providing for appropriations shall be referred to the Council, and all appropriations approved by the Council shall be included in the annual budget."

And by inserting in lieu thereof the following: "Any resolution passed and adopted by the House of Delegates at any regular or special session thereof, which provides for or contemplates the appropriation or expenditure of more than the sum of $1,000, shall not be effective for any purpose unless and until approved by the Council. All appropriations, regardless of amount, approved and made by the Council shall, if expended, be reported to the House of Delegates at its next annual session, and any unexpended portion of any thereof shall be included in the annual budget.

The Speaker: This will lie on the table until next year.

* * *

The Speaker: Gentlemen of the House: That concludes most of the business. Your Speaker has a resolution to suggest, if you have no objection:

Resolution of Appreciation

The California Medical Association, approaching the close of its Sixty-fifth Annual Session in Coronado, inspired by the appreciation, enjoyment, comfort and unbounded hospitality that have been experienced by all members in attendance, desires to give evidence of its appreciation. Therefore be it

Resolved, That the Association's secretary transmit our sincere thanks and gratitude to the following who have made most generous contributions of time, labor and friendliness to all members in attendance, and will cause us to depart to our respective homes with such pleasant memories that will endure and abide with us:

Officers and members of the San Diego County Medical Society.

Officers of the United States Naval Hospital.

Our guest speakers.

The editorial and phototorial staffs of the San Diego newspapers and news agencies.

The management and staff of the Hotel del Coronado.

The Auxiliary of the San Diego County Medical Society.

The city and county officials, and all others who have contributed to our comfort and pleasure.

The Speaker would be glad to entertain a motion that this resolution be adopted.

The motion was made by Doctor Crosby, seconded by Doctor Gibbons, and the resolution was unanimously adopted.

* * *

The Speaker: Gentlemen of the House, in bringing a last meeting of the House of Delegates to conclusion, there is always a note of regret as well as of happiness, for we part with the man who has served as our president for the year, while we turn to greet our incoming leader.

This first feeling is greatly accentuated tonight. President Peers is not with us because of the sudden critical illness today of his dearly beloved mother. We have a report late this evening that she is sinking rapidly. He has given so freely of himself in our behalf; his friendship for "his boys," as he calls us, has been so real and true that we all regret that he could not have concluded the Coronado meeting happily. The Speaker would be pleased to receive a motion authorizing the secretary to convey to Doctor Peers, on behalf of the House and the Association, a resolution of grateful appreciation for his devoted service to this Association, and of our sympathy for him in this time of sorrow.

It was moved and seconded that this resolution be adopted.

The Speaker: Now, Doctor Morrow, Mr. President-Elect, will you come to the platform? President Pallette, will you stand? It is customary to pass the badges of the president and the president-elect on to the incoming officers. The president's badge is not here. You will receive that later. Gentlemen, your new officers. (Applause.)

We will now hear from President Pallette.

Doctor Pallette: Mr. Speaker, this is Pallette of California. These days in our annual meeting are very busy ones. In fact, I have been so busy the last few days that I have forgotten a date, which no married man should ever forget, for it was only a few moments ago that I was reminded by telegram from our home town that today is Mrs. Pallette's birthday. Now I think this experience perhaps is indicative of what is going to happen to me and my family during the next year. I suspect that, at the end of this coming year, I will not only have forgotten the birthdays of my wife, children, and grandchildren, but I may have even forgotten that I have a wife or children or grandchildren! There is a lot of work ahead for all of us. Bill Toland and Bob Peers have each been declared, at the end of their year's work, among the great presidents of the California Medical Association. I think at the time those declarations were made we were right, and I think all of the twelve living past presidents will agree with that sentiment. Now, tonight, you have chosen as president-elect another prominent member of the California medical profession. It has been my privilege during the past four years to serve as a member of one of the State Board of Health, of which Dr. Howard Morrow is president. Dean Chandler has referred to the prodigious capacity and willingness of Tom Kelly as a worker in the Council, and I think we can say the same thing of Howard Morrow in the State Board of Health. Doctor Morrow has given an enormous amount of time and has shown an enormous amount of ability and judgment, and I am sure that two years from now we will be saying that Howard Morrow is also one of the greatest presidents the California Medical Association has ever had.

I have one request to make. I hope that every delegate here will go home and report to his county society and fellow members that the general officers of the State Association, the members of its Council, and Executive Committee, of the standing and special committees, are all striving to do their utmost for the welfare of scientific and organized medicine in the State of California. Thank you. (Applause.)

The Speaker: If there is no further business, we stand adjourned without day.

The meeting was adjourned at 12:15 a. m.

Attest: W. W. Roblee, *Speaker*.
F. C. Warnshuis, *Secretary*.

ADDENDUM

Roll Call of House of Delegates

OFFICERS

Peers, R. A.
Pallette, E. M.
Roblee, W. W.
Graves, J. H.
Kress, G. H.
Dukes, C. A.
Emmons, C. L.
Howson, C. R.
Ullmann, H. J.
Anderson, A. E.
Phillips, A. L.
Schaupp, K. L.
Hamlin, O. D.
Schoff, C. E.
Rogers, H. S.
Wilson, H. H.
Tanner, C. O.
Kiger, W. H.
Gibbons, M. R.
Kelly, T. H.
Harris, J. B.

DELEGATES

Alameda
Allen, Dorothy
Crosby, Daniel
Dougherty, John A.
Ewer, E. N.
Lawson, T. C.
Makinson, F. R.
Nelson, Roy F.
Peers, Robert S.
Reinle, George G.
Rogers, Hobart

Butte
Unrepresented

Contra Costa
Weil, S. N.

Fresno
Dau, N. J.
Randel, H. A.
Walker, G. W.

Humboldt
Unrepresented.

Imperial
House, L. C.

Kern
Packard, Louis A.

Kings
Chamlee, F.

Lassen-Plumas-Modoc
McKenney, Phillip W.

Los Angeles
Alesen, L. A.
Anderson, C. M.
Askey, J. M.
Askey, Vincent
Berg, George O.
Breitman, H. B.
Burns, E. M.
Clarke, Fred B.
Cowgill, C. H.
Crispin, E. L.
Crosson, John W.
Daniel, W. H.
Ellis, Leland W.
Ernsberger, George H.
Eusden, Ralph B.
Francis-Chalmers, V. W.
Gibbs, D. H.
Godwin, D. E.
Goin, Lowell S.
Houghton, A. D.
Huggins, Walter L.
Jones, Newell
Kling, Daniel A.
Lakey, W. J.
Larson, E. Eric
Magan, Percy T.
Maner, George D.
McColl, D. R.
McKinnon, Douglas A.
Meland, Orville N.
Molony, William R.
Nevius, J. W.
Percy, James F.
Pottenger, Francis M.
Putnan, H. A.
Remmen, E. T.
Ruddock, John C.
Scott, A. J.
Shoemaker, Harlan
Smiley, Kenneth E.
Snure, Henry
Stephens, Philip H.
Swearingen, F. C.
Swindt, Joseph K.
Taylor, Raymond G.
Toland, Clarence G.
Wessels, Walter F.
Whalman, Harold F.

Marin
Clark, Carl W.

Mendocino-Lake
Cushman, Ruggles A.

Merced
Unrepresented

Monterey
Wolfson, Mast

Napa
Dawson, George I.

Orange
Ball, D. R.
Hollingsworth, Merrill
Huffman, H. G.
Olson, G. W.

Placer
Empey, Lucas W.

Riverside
Adams, Bon O.
Baer, Herman
Coon, G. Wayland

Sacramento
Hale, Nathan G.
Johnson, Oscar F.
Scatena, F. N.

San Benito
Unrepresented

San Bernardino
Gentry, H. G.
Nichols, Robert C.
Pritchard, Walter
Walton, H. M.

San Diego
Barrow, W. H.
Crabtree, Elmo G.
Macpherson, Fraser L.
McClendon, S. J.
Welpton, Martha A.

San Francisco
Ashley, Rea E.
Bell, H. Glenn
Best, Elbridge J.
Bolin, Zera E.
Bruck, Edwin L.
Chandler, Loren R.
Cheney, Garnett
Cline, John W.
Garland, L. H.
Geiger, J. C.
Gilman, Philip K.
Hosford, George N.
Mentzer, Mary Jones
Mentzer, Stanley H.
Parker, L. O.
Seitz, Roland P.
Stephenson, H. A.
Stone, Robert S.
Wood, David A.

San Joaquin
Powell, D. R.

San Luis Obispo
Teass, C. J.

San Mateo
Ray, Hartzell

Santa Barbara
Atsatt, Rodney
Freidell, Hugh
Henderson, Harry E.

Santa Clara
Burchfiel, C. M.
Canelo, C. Kelly
Kneeshaw, R. S.
Lee, Russell V.

Santa Cruz
Unrepresented

Shasta
Kay, G. Leslie

Siskiyou
Hart, V. W.

Solano
Green, John W.

Sonoma
Butler, F. O.
Quarry, P. T.

Stanislaus
Unrepresented

Tehama
Frey, R. G.

Tulare
Rosson, Ray W.

Ventura
Morrison, A. A.

Yolo-Colusa-Glenn
Poage, C. A.

Yuba-Sutter
Unrepresented

COUNCIL MINUTES*

Minutes of the Two Hundred and Forty-Second Meeting of the Council of the California Medical Association

Held in the Gold Room, Hotel Del Coronado, Coronado, California, Sunday, May 24, 1936, at 8 p. m.

1. **Call to Order.**—The meeting was called to order by the chairman, T. Henshaw Kelly, with the following members present: President Robert A. Peers, President-Elect Edward M. Pallette, Speaker W. W. Roblee, Chairman T. Henshaw Kelly, Councilors Morton R. Gibbons, C. O. Tanner, K. L. Schaupp, Calvert L. Emmons, Carl R. Howson, Henry J. Ullmann, A. E. Anderson, Alfred L. Phillips, O. D. Hamlin, C. E. Schoff, Henry S. Rogers, William H. Kiger, J. B. Harris; Chairman of Public Relations Committee Charles A. Dukes, Editor George H. Kress, Secretary F. C. Warnshuis, and General Counsel Hartley F. Peart.

2. **Report of Council.**—T. Henshaw Kelly, chairman, presented the annual report of the Council, which was discussed section by section and certain additions recommended, approval of the report being deferred until the Monday meeting of the Council.

3. **Report of the Committee on Scientific Sections.**—Morton R. Gibbons, chairman of the Committee on Revision of Scientific Sections, submitted a report on plans for elimination of the multiplicity of section meetings at annual sessions.

Councilor Morton R. Gibbons moved, seconded by Councilor Kiger, that the sections be consulted and given an opportunity to study the problem and that the Council be authorized to make the necessary changes in system when and if a satisfactory plan is devised. Carried.

4. **Committee on Malpractice Insurance.**—George G. Reinle, chairman of the Committee on Malpractice Insurance, submitted a written report recommending that the Association do not enter into the insurance business at this time, since satisfactory coverage can be secured by members from commercial insurance carriers.

It was moved by Councilor Wilson, seconded by Councilor Ullmann, that the report of the Committee on Malpractice Insurance be accepted and approved by the Council and that it be submitted to the House of Delegates with the Council's annual report. Carried.

5. **Committee on Tax-Supported Hospitals and Medical Care.**—A. E. Anderson, chairman of the Committee on Tax-Supported Hospitals, submitted a supplemental report to the report of the Committee as published in the Pre-Convention Bulletin.

It was moved by Councilor Rogers, seconded by Councilor Ullmann, that the report be accepted. Carried.

It was moved by President Peers, seconded by Councilor Anderson, that Mr. Alfred Siemon be invited to address the House of Delegates on Monday evening. Carried.

After discussion of the value of the tax cartoons published by the State Chamber of Commerce, on motion of Editor Kress, seconded by President-Elect Pallette, the secretary and the editor were empowered to insert reprints of these cartoons in the Journal as a supplement at a cost not in excess of $500. Carried.

It was moved by Councilor Wilson, seconded by Speaker Roblee, that the county hospital matter be given preference and first consideration by the House of Delegates and the Council, and that the committee be continued, to work through the Council and the Committee on Public Policy and Legislation. Carried.

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* The minutes of the two hundred and forty-first meeting of the Council of the California Medical Association were printed in the May, 1936, issue of California and Western Medicine, page 437.

6. **Committee on Disciplinary Procedures.**—Speaker Roblee, chairman of the Committee on Disciplinary Procedures, outlined proposed amendments to his report as published in the Pre-Convention Bulletin and, with the approval of the Council, consideration of the report was deferred until Monday's Council meeting.

7. **House of Delegates Order of Business.**—In accordance with constitutional provision, the order of business of the two meetings of the House of Delegates were approved.

8. **Reports of Standing Committees.**—After consideration, on motion of Editor Kress, seconded by Councilor Kiger, the reports of Standing and Special Committees, as published in the Pre-Convention Bulletin; were approved for transmission to the House of Delegates.

9. **Annual Dues.**—It was moved by President Peers, seconded by Councilor Ullmann, and Councilor Gibbons, that the Council recommend to the House of Delegates that the House of Delegates make the dues of the California Medical Association for the year 1937 at $15 for that year. Carried.

10. **Standing Committee Memberships.**—It was moved by Councilor Gibbons, seconded by President-Elect Pallette that the chairman appoint a committee of three to review the membership of Standing Committees. Carried.

The chairman appointed Doctors Kiger, Schaupp, and Schoff.

11. **Adjournment.** — At this point, 11:45 p. m., the Council adjourned to meet at 2 p. m. Monday.

T. Henshaw Kelly, *Chairman.*
F. C. Warnshuis, *Secretary.*

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Minutes of the Two Hundred and Forty-Third Meeting of the Council of the California Medical Association

Held in the Gold Room, Hotel Del Coronado, Coronado, California, Monday, May 25, 1936, at 2 p. m.

1. **Call to Order.**—The meeting was called to order by the chairman, T. Henshaw Kelly, with the following members present: President Robert A. Peers, President-Elect Edward M. Pallette, Speaker W. W. Roblee, Chairman T. Henshaw Kelly, Councilors Morton R. Gibbons, C. O. Tanner, Karl L. Schaupp, Calvert L. Emmons, Carl R. Howson, H. J. Ullmann, A. E. Anderson, Alfred L. Phillips, O. D. Hamlin, C. E. Schoff, Henry S. Rogers, William H. Kiger, J. B. Harris; Chairman of Public Relations Committee Charles A. Dukes, Editor George H. Kress, Secretary F. C. Warnshuis, and General Counsel Hartley F. Peart.

Absent: None.

2. **Medical Society of the State of California.**—At this point a recess of the Council was declared to permit a meeting of the Medical Society of the State of California.

3. **Report of Council.** — The Council was called to order after the recess, and consideration was given to the report of the Council.*

It was moved by Editor Kress, seconded by President Peers, that a short statement be included in the Council's report imparting the relationship of the Medical Society of the State of California and a brief outline of cases settled, pending and dismissed. Carried.

It was moved by President Peers, seconded by Chairman of Public Relations Committee Dukes, that the editor include in some issue of the Journal an historical article on the Indemnity Defense Fund. Carried.

It was moved by Speaker Roblee, seconded by Councilor Ullmann, that the report of the Council, as amended, be approved for submission to the House of Delegates. Carried.

4. **Code for Disciplinary Procedure.**—Speaker Roblee, chairman of the Committee on Disciplinary Procedure, presented his report, which was discussed in detail.

It was moved by Councilor Ullmann, seconded by President-Elect Pallette, that the report of the committee be approved for submission to the House of Delegates. Carried.

5. **Adjournment.**—It was moved by Chairman of Public Relations Committee Dukes, seconded by Councilor Rogers, that the Council adjourn to meet at 9 a. m. Tuesday.

T. Henshaw Kelly, *Chairman.*
F. C. Warnshuis, *Secretary.*

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Minutes of the Two Hundred and Forty-Fourth Meeting of the Council of the California Medical Association

Held in the Gold Room, Hotel Del Coronado, Coronado, California, Tuesday, May 26, 1936, at 9 a. m.

1. **Call to Order.**—The meeting was called to order by Chairman T. Henshaw Kelly, with the following members present: President Robert A. Peers, President-Elect Edward M. Pallette, Speaker William W. Roblee; Chairman T. Henshaw Kelly, Councilors C. O. Tanner, Karl L. Schaupp, Calvert L. Emmons, Carl R. Howson, Henry J. Ullmann, A. E. Anderson, Alfred L. Phillips, C. E. Schoff, Henry S. Rogers, William H. Kiger, J. B. Harris; Chairman of Public Relations Committee Charles A. Dukes, Editor George H. Kress, Secretary F. C. Warnshuis, and General Counsel Hartley F. Peart.

Absent: Councilors Hamlin and Gibbons.

2. **Appeals.**—It was moved by Councilor Harris, seconded by Councilor Ullmann, that the Council convene in executive session at 2 p. m. Wednesday, May 27, 1936, for consideration of the appeals which are at present before it. Carried.

3. **Reinstatement of Members.** — It was moved by Councilor Ullmann, seconded by Councilor Rogers, that all members whose memberships had lapsed on account of nonpayment of dues and whose dues had been remitted since April 1 by the component county societies be reinstated to membership. Carried.

4. **Financial Statement.**—It was moved by Councilor Emmons, seconded by Councilor Ullmann, that the financial statements for the months of March and April, 1936, as mailed to all members of the Council, be approved. Carried.

5. **California Code Commission.**—It was moved by President Peers, seconded by Councilor Schaupp, that the matter of the proposed business and professional code of the California Code Commission be referred to the chairman of the Committee on Public Policy and Legislation and the General Counsel. Carried.

6. **Bureau of Registration of Nurses.**—It was moved by Chairman of Public Relations Committee Dukes, seconded by President Peers, that Benjamin Black be appointed as the Association's northern representative on the Bureau of Registration of Nurses' Advisory Committee. Carried.

7. **Dues.**—It was moved by President Peers, seconded by Councilor Harris, that where a request is made for a refund of dues of a deceased member such refund be made in proportion to the unexpired time. Carried.

8. **Medical Practice Act.**—The secretary read a proposed amendment to the Medical Practice Act, Section 14 (12-a), suggested by the San Diego County Medical Society, providing that "advertising definite or fixed prices for professional services" be included as a cause for revocation of license.

It was moved by Councilor Kiger, seconded by Editor Kress, that the proposed amendment be referred to the chairman of the Legislative Committee and the General Counsel. Carried.

9. **County Society Organizations.**—The secretary presented a report on the organization of county societies in California.

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* For report of the Council, see minutes of the House of Delegates, which appear on page 71.

It was moved by Editor Kress, seconded by President Peers, that the secretary write to the American Medical Association calling its attention to the dual set-up of certain county societies and requesting that the proper footnote be included in any further reports on county organizations in California. Carried.

10. **Council Report.**—It was moved by Councilor Howson, seconded by Councilor Schaup, that mimeographed copies of the report of the Council be presented to members of the House of Delegates. Carried.

11. **Forestry Reserves.**—It was moved by Councilor Ullmann, seconded by Councilor Rogers, that Doctors Harris and Warnshuis and Mr. Peart be authorized to take the necessary steps with the State Chamber of Commerce to perfect the reorganization of the State Forestry Reserves. Carried.

12. **Retired Membership.**—It was moved by Councilor Ullmann, seconded by Councilor Harris, that Henry Lewis Wagner, member of the San Francisco County Medical Society, be granted retired membership in the California Medical Association. Carried.

13. **California Drugless Physicians, Inc.** — It was moved by Councilor Rogers, seconded by Councilor Ullmann, that the correspondence from the California Drugless Physicians be referred to the Legislative Committee and the General Counsel. Carried.

14. **Constitution and By-Laws.** — It was moved by Speaker Roblee, seconded by Councilor Harris, that the secretary and the editor be authorized to print the Constitution and By-Laws in CALIFORNIA AND WESTERN MEDICINE in a separate and extra form and that sufficient reprints be made to have copies available for members. Carried.

15. **American Medical Association.** — A letter was read from the San Francisco County Medical Society suggesting that the American Medical Association be invited to hold its annual meeting in California during 1938.

It was moved by Editor Kress, seconded by Councilor Kiger, that the California Medical Association give its approval to the invitation to the American Medical Association to hold its 1938 meeting in San Francisco and that the secretary transmit the invitation to the secretary of the American Medical Association. Carried.

16. **Correspondence.**—Correspondence from a member of the San Francisco County Medical Society regarding an article which appeared in the San Francisco County Bulletin, was read.

It was moved by Councilor Ullmann, seconded by Councilor Rogers, that a letter be sent to Doctor Brown calling attention to the fact that the article in question appeared in the San Francisco County Bulletin and that correspondence regarding it should, therefore, be addressed to the county society. Carried.

17. **Nevada State Society.**—A letter from Secretary Brown of the Nevada State Medical Association concerning certain papers which had been read before the Nevada Association and submitted to CALIFORNIA AND WESTERN MEDICINE for publication, but which it was not possible to accept, was read and discussed. The heavy demands on the space of CALIFORNIA AND WESTERN MEDICINE by members of the California Medical Association, and the fact that practically one-half or more of all California Medical Association annual session papers must be declined on that account, made necessary a reconsideration of the agreement with the Nevada Medical Association of several years ago, in regard to publication of that Association's annual session papers. It was pointed out that a limited number (about eighty) of the Nevada State Association members were given a special two-dollar subscription rate, although members of the California Medical Association were themselves assessed on a three-dollar subscription basis. It was felt that, as an expression of fraternal courtesy, this rate for Nevada Association members whose subscriptions were sent through the office of the secretary of the Nevada State Medical Association should continue, but that under existing circumstances and the heavy space demands by California Medical Association members it would be necessary to terminate the old understanding and arrangements concerning CALIFORNIA AND WESTERN MEDICINE. Upon motion duly made and seconded, it was so ordered.

It was also voted that a courteous letter of explanation of the above action be sent to the Nevada State Medical Association.

18. **California and Western Medicine.**—It was moved by Councilor Ullmann, seconded by Councilor Rogers, that the editor be authorized to increase the JOURNAL sixteen pages until the present overflow of accepted papers is published. Carried.

19. **Association of California Hospitals.**—Resolution of the Association of California Hospitals on maternity hospitals was ordered filed since the matter is covered by law.

20. **Adjournment.** — At this point the Council adjourned to meet at 2 p. m. Wednesday, May 29, 1936.

T. HENSHAW KELLY, *Chairman.*
F. C. WARNSHUIS, *Secretary.*

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Minutes of the Two Hundred and Forty-Fifth Meeting of the Council of the California Medical Association

Held in the Gold Room, Hotel Del Coronado, Coronado, California, Wednesday, May 27, 1936, at 2 p. m.

1. **Call to Order.**—The meeting was called to order by Chairman T. Henshaw Kelly, with the following members present: President Robert A. Peers, President-Elect Edward M. Pallette, Speaker William W. Roblee, Chairman T. Henshaw Kelly, Councilors C. O. Tanner, Karl L. Schaupp, Calvert L. Emmons, C. R. Howson, Henry J. Ullmann, A. E. Anderson, A. L. Phillips, O. D. Hamlin, Morton R. Gibbons, C. E. Schoff, Henry S. Rogers, W. H. Kiger, J. B. Harris; Chairman of Public Relations Committee Charles A. Dukes, Editor George H. Kress; Secretary F. C. Warnshuis, and General Counsel Hartley F. Peart.

2. **Scientific Contributions.** — A request for Council action on the matter of ownership and publication of scientific papers was received.

It was moved by Editor Kress, seconded by Councilor Ullmann, that inasmuch as papers read in the scientific sections are original contributions that have not been previously read or presented before similar organizations, it be

Resolved, That the rule be established for the guidance of section officers when confronted with a scientific paper which the author has previously presented or published elsewhere, as follows: That section officers, under this rule, be instructed to decline to permit the author to read such a paper before any section during an annual session, and refer the matter to the Executive Committee of the Council. This rule is to be interpreted that it does not apply to members who have presented and worked up their symposium or paper before a group of specialists or in various intercounty physicians' meetings of special organizations.

3. **Annual Session of 1937.**—Dr. Mast Wolfson extended the invitation of the Monterey County Society for the holding of the next annual session in Del Monte.

Invitation from the Sacramento Society to hold the annual session at Sacramento was read and the facilities in Sacramento presented by Mr. Roy Clare.

It was moved by Chairman of Public Relations Dukes, seconded by President-Elect Pallette, that the 1937 annual session be held at Del Monte. Carried. Doctors Schoff and Harris voted in the negative.

It was moved by Councilor Ullmann, seconded by Councilor Wilson that the Executive Committee be empowered to set the date of the next annual session. Carried.

4. **Invited Guests.**—It was moved by Councilor Wilson, seconded by Councilor Emmons, that the expenses of invited guests be left to the Auditing Committee. Carried.

5. **Standing Committees.**—William H. Kiger, chairman of the committee appointed to review the membership of Standing Committees, presented the committee's recommendations, which were approved by the Council for submission to the House of Delegates. (See minutes of House of Delegates for membership of committees.)

6. **Cancer Commission.**—In accordance with constitutional provision, President-Elect Pallette reported that he had reappointed as members of the Cancer Commission Henry J. Ullmann, Clarence G. Toland, and Harold Brunn. The appointments were approved by the Council for submission to the House of Delegates.

7. **Expert Testimony.**—A case involving a policy of remuneration of physicians for the furnishing of testimony in court was brought to the attention of the Council.

It was moved by Councilor Ullmann, seconded by Chairman of Public Relations Committee Dukes, that the general counsel be empowered to act in the case; legal expense not to exceed $300, and printing and court costs not to exceed $450. Carried.

Kern County Appeal. — (*a*) Roll call recorded all councilors present. President-Elect Pallette and Councilor Tanner not having heard all the arguments did not participate in the deliberations or the decision.

(*b*) The secretary certified that all briefs and arguments had been supplied to each voting member of the Council.

(*c*) The Council then considered and discussed all the documents comprising the record, including the transcript of the proceedings, and discussed and deliberated upon and considered the same and the oral arguments and the written arguments in the matter of each of said appeals.

(*d*) The following motion was made by Councilor Rogers, seconded by Councilor Wilson:

Resolved, That the Council of the California Medical Association approve and affirm the action of the Kern County Medical Society and its Board of Directors in the disciplinary proceedings taken against Dr. Joe Smith, resulting in his expulsion from said society on November 25, 1935, and that this resolution shall be and constitute the decision of the Council of this Association on the appeal of said Dr. Joe Smith.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Rogers, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association modify the action of the Board of Directors of the Kern County Medical Society in the disciplinary proceedings taken against John M. Kirby, resulting in his suspension from said society on November 25, 1935, for a period of fifteen years, by reducing said period of suspension to the period of one year and that in all other respects said action shall be and is hereby approved and confirmed and that this resolution shall constitute the decision of the Council of this Association on the appeal of said Dr. John M. Kirby.

Said resolution was carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schaupp, seconded by Councilor Anderson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association modify the action of the Board of Directors of the Kern County Medical Society in the disciplinary proceedings taken against R. M. Jones, resulting in his suspension from said society on November 25, 1935, for a period of fifteen years, by reducing said period of suspension to the period of one year and that in all other respects said action shall be and is hereby approved and confirmed and that this resolution shall constitute the decision of the Council of this Association on the appeal of said Dr. R. M. Jones.

Said resolution was carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Rogers, seconded by Councilor Schoff, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association modify the action of the Board of Directors of the Kern County Medical Society in the disciplinary proceedings taken against Homer Rogers, resulting in his suspension from said society on November 25, 1935, for a period of five years, by reducing said period of suspension to the period of one year and that in all other respects said action shall be and is hereby approved and confirmed and that this resolution shall constitute the decision of the Council of this Association on the appeal of said Dr. Homer Rogers.

Said resolution was carried by the affirmative votes of all of the councilors present and acting.

San Francisco County Society Appeals.—(a) Roll call recorded all participating councilors and officers present. Councilors Gibbons and Schaupp, being ineligible to participate, withdrew and left the executive session.

(*b*) The secretary certified that all briefs had been supplied to each voting member of the Council.

(*c*) On inquiry by the chairman, all voting members of the Council affirmed that they had read all of the briefs of the appellants and respondents.

(*d*) The Council then considered and discussed all the documents comprising the record, including the transcript of the proceedings, and discussed and deliberated upon and considered the same and the oral arguments and the written arguments in the matter of each of said appeals.

(*e*) The following motion was made by Councilor Ullmann, seconded by Councilor Rogers:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken on February 17, 1936, against F. W. Callison, resulting in his expulsion from said society, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said F. W. Callison.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against Bertram Stone, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said Bertram Stone.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against Frank E. Stiles, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said Frank E. Stiles.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against Edward M. Talbott, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said Edward M. Talbott.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against James F. Pressley, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said James F. Pressley.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against Louis Clive Jacobs, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said Louis Clive Jacobs.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against George J. Heppner, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said George G. Heppner.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against Harry W. Davis, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said Harry W. Davis.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against Herbert J. Cohn, resulting in his suspension from said society for a period of ninety days, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said Herbert J. Cohn.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

* * *

On motion of Councilor Schoff, seconded by Councilor Wilson, and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association approve and affirm the action of the San Francisco County Medical Society and its Board of Directors in the disciplinary proceedings taken February 17, 1936, against Joy L. McClure, resulting in his suspension from said society for a period of one year, and that this resolution shall be and constitutes the decision of the Council of this Association on the appeal of said Joy L. McClure.

A vote was then taken on said motion and said motion was unanimously carried by the affirmative votes of all of the councilors present and acting.

The Council arose from executive session and instructed the secretary to notify all parties concerned as to the action recorded by the Council.

9. **Administration of Anesthetics.**—It was moved by Councilor Rogers, seconded by Councilor Schaupp, that Mr. Peart be instructed to ask for a new hearing in the case of *Francis* vs. *Nelson*. Carried.

10. **Adjournment.**—On motion of Councilor Ullmann, seconded by Speaker Roblee, the Council adjourned to meet at 9 a. m. Thursday, May 28, 1936.

T. Henshaw Kelly, *Chairman*.
F. C. Warnshuis, *Secretary*.

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Minutes of the Two Hundred and Forty-Sixth Meeting of the Council of the California Medical Association

Held in the Gold Room, Hotel Del Coronado, Coronado, California, Thursday, May 28, 1936, at 9:30 a. m.

1. **Call to Order.**—The meeting was called to order by the chairman *pro tem*, with the following members present: President Edward M. Pallette, President-Elect Howard Morrow; Speaker William W. Roblee; Councilors T. Henshaw Kelly, Morton R. Gibbons, C. O. Tanner, Karl L. Schaupp, Calvert L. Emmons, Carl R. Howson, Henry J. Ullmann, A. E. Anderson, Alfred L. Phillips, O. D. Hamlin, C. E. Schoff, Henry S. Rogers, William H. Kiger, J. B. Harris, H. Wilson; Chairman of Public Relations Committee Charles A. Dukes, Editor George H. Kress, Secretary F. C. Warnshuis, and General Counsel Hartley F. Peart. (Past President Peers was absent on account of the serious illness of his mother.)

2. **Chairman of Public Relations Committee.**—The secretary announced that the committee had elected Charles A. Dukes, chairman, and that Doctor Dukes was, therefore, a member of the Council.

3. **Chairman of Council.**—On nomination of Councilor Kelly, seconded by Councilor Kiger, Morton R. Gibbons was unanimously elected chairman of the Council for the ensuing year. Doctor Gibbons was inducted as chairman and assumed the chair.

4. **Vice-Chairman of Council.** — On nomination of President Pallette, seconded by Councilor Hamlin, Junius B. Harris was unanimously elected vice-chairman of the Council for the ensuing year.

5. **Secretary-Treasurer.**—On nomination of Councilor Howson, seconded by Councilor Hamlin, Frederick C. Warnshuis was unanimously elected secretary-treasurer of the Association for the ensuing year.

6. **Editor.**—On nomination of Chairman of Public Relations Committee Dukes, George H. Kress was unanimously elected editor of CALIFORNIA AND WESTERN MEDICINE.

7. **General Counsel.** — It was moved by Councilor Rogers, seconded by Speaker Roblee, and unanimously carried, that Hartley F. Peart be appointed general counsel for the California Medical Association.

8. **Associate General Counsel.** — It was moved by Councilor Rogers, seconded by Councilor Ullmann, and unanimously carried, that Hubert T. Morrow be appointed associate counsel for the California Medical Association without retainer fee.

9. **Council Meeting.**—The Council delegated to the Executive Committee the power to set the date of the next meeting of the Council, so that full consideration could be given to the matter of the county hospital initiative.

10. **Salaries and Office Activities and Personnel.**—At this point the Council went into executive session, all employees of the Association absenting themselves.

After discussion, on motion of Councilor Kiger, seconded by Speaker Roblee, and unanimously carried, the salary of the secretary-treasurer and director of the Department of Public Relations was approved in accordance with the budget approved by the House of Delegates.

It was pointed out that in years past a committee had been appointed to survey the activities and expenses of the Association and the JOURNAL and that such procedure was highly desirable from the standpoint of informing the members of the Association of the details connected with the organization and finances of the Association.

It was moved by Councilor Kelly, seconded by Speaker Roblee, that a committee of three members of the Council be appointed by the chairman to prepare a plan to govern legal services rendered to the Association and that in the meantime it be understood that the general counsel, Mr. Peart, be continued in that capacity under the present retainer until the committee has submitted its report to the Council; and that the committee be also instructed to bring in a report and recommendations on other major activities and expenses of the Association for the guidance of the Council.

It was understood that the information obtained in the report be placed in such form as will be suitable for presentation to county societies for the information of all members.

It was moved by Councilor Ullmann, seconded by Councilor Rogers, that the salary of the general counsel and the editor be continued as at present until the report of the committee is received and acted upon. Carried.

It was moved by Chairman of Public Relations Committee Dukes, seconded by Councilor Kiger, that the secretary-treasurer be empowered and given authority to direct the personnel and supervise the administrative work in the secretary-treasurer's office, and that he have the authority to engage and discharge clerical assistants of the secretary-treasurer, under budget provisions. Carried.

12. **Auditing Committee.**—Chairman Gibbons appointed as members of the Auditing Committee, Karl L. Schaupp (chairman), O. D. Hamlin, and T. Henshaw Kelly. The appointments were approved by the Council.

13. **Adjournment.**—There being no further business the Council adjourned.

MORTON R. GIBBONS, *Chairman.*
F. C. WARNSHUIS, *Secretary.*

STATE AND COUNTY SOCIETY ACTIVITIES

TELETYPE

On June 15 a three-way teletype installation was made in the Association offices. One station is in the Association headquarters, the second in Sacramento in Dr. J. B. Harris' office, and the third in the Los Angeles County Medical Association building. This system of communication will produce the following advantages: Immediate contacts in sending and receiving messages, speed, prompt action, and reduction of telephone and telegraph bills.

Members in Los Angeles or Sacramento can immediately contact headquarters by telephoning to the Los Angeles County Medical Association executive offices or to Dr. J. B. Harris and have their messages transmitted and obtain immediate answer. The code call numbers are: California Medical Association, San Francisco, S. F. 49; Los Angeles County Medical Association, * ; Dr. J. B. Harris, Sac. 66.

* * *

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As the Editor has previously commented, each issue of CALIFORNIA AND WESTERN MEDICINE is copyrighted. Under federal copyright laws no article or portion of an article or any other printed items in any issue can be produced in any other publication without permission. The Council has delegated to Editor Kress and the secretary authority to grant requests to reprint published material. A blank permission is given to all state journals and to the *Journal of the American Medical Association.* All other publications must submit applications requesting permission to reprint articles and items.

The underlying reason is as follows: There are many medical publications that are produced for the profit obtained from adavertising. They accept any and all types of advertising down to the rankest nostrums. No reputable doctor will submit original articles to these quasi-medical journals. Their management is dependent upon reputable journals for their medical articles. These are "lifted" bodily or are abstracted and are used to fill their reading pages.

We can well do without these undesirable publications. If all state journals would pursue the same policy, these third- and fourth-grade medical catalogues would disappear. State associations will do well to enforce their copyright protection.

* * *

AMERICAN MEDICAL ASSOCIATION POLICIES

The following important policies were established by the American Medical Association House of Delegates at Kansas City.

Hospital Staffs.—Hospitals approved for intern training must have staffs composed of members of county societies.

Medical Colleges.—Urged to give a course in medical economics.

Technicians and Medical Helpers.—These to be under the supervision and absolute control of the medical profession.

Radiology.—Is the practice of medicine, and that all services connected with the practice of radiology shall be under the control of the medical profession and this same principle pertains to other professional and technical services.

Hospital Practice.—Invasion by hospitals of the field of the practice of medicine should be condemned as a violation of the fundamental rights of physicians and that it demands militant opposition to the end that such activities cease.

Hospitals.—Approval will be withdrawn from any hospitals which grant special privileges to staff members in the form of lower rates to patients.

Contraceptive Practice.—Committee continued for further study. No conclusions advanced.

Disciplination of Members.—The Judicial Council was given authority to initiate disciplinary procedures against members when county and state organizations fail to exercise disciplinary powers.

Disapproved Listing in Special Medical Directories.—It was declared to be unethical for members to pay for the listing of their names in special medical directories.

The foregoing are but a few of the more important actions of the American Medical Association. Members should read the entire minutes as published in the May 23 and May 30 issues of the *Journal of the American Medical Association.*

* * *

INDUCTION OF NEW MEMBERS

In order to become a member of a county medical organization a physician fills out an application for membership, setting forth his qualifications. These are passed upon and in due time his name is presented to the society for election. When elected he is notified and, without further ceremony, he becomes a member. This method is open to criticism and should be improved.

An individual affiliating with other organizations, his church, lodge, club, luncheon club, is received as a member with some degree of ceremony, conducted for the purposes of impressing the candidate with the purposes and policies as well as the value of membership in the organization he is joining. This is proper and meritable.

We have frequently stated that, next to his degree and license to practice, a physician's most valuable asset is his membership certificate of his county society. We admit him to membership without initiation exercises.

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* At the time of this writing, the Los Angeles station had not been given a code number. It will be printed in a later issue.

Often the new member has never read the constitution and by-laws of his county and state medical bodies. Frequently he is without knowledge of the Principles of Medical Ethics. He does not possess this information because no one has ever given him these documents.

Therefore we suggest the following procedure. At the first meeting after which a physician has been elected to membership he should be notified to be present. At a proper time during the meeting the new member should be called to the rostrum and be greeted by the president. In his greeting the president should outline the policies and purposes of the society, relate the value, obligations and duties of membership, and welcome the new member. In conclusion, the new member should be presented with a copy of the constitution and by-laws of his county and state association and of the Principles of Ethics.

We feel that such a ceremony will be helpful and beneficial not only to the new member, but also to the older member in reminding them of their obligations. May we hear that county presidents are adopting these suggestions?

* * *

THINGS WORTH KNOWING

1. Lists of officers, councilors, committees and county societies, with names of presidents and secretaries, appear in the front advertising section of each issue of this publication.
2. Our advertisers are all approved business organizations.
3. Books and articles in California medical libraries and in the Surgeon-General's library may be obtained through your local public library.
4. Packages of recent literature may be obtained on any medical subject by writing to the Packet Library, American Medical Association, 535 North Dearborn Street, Chicago. A nominal charge of 25 cents for postage is made.
5. The American Medical Association Medical Directory lists all licensed physicians by states and counties.
6. X-ray films are the property of the radiologist.
7. Under Editorials, Association activities, and in the Department of Public Relations, members will find progress reports of all Association activities.
8. The invasion by hospitals of the practice of medicine was condemned at the recent American Medical Association meeting.
9. The American Medical Association has declared that technical services in laboratories are medical services and hence should be under medical control, and not under hospital or lay control.
10. Medical services cannot be divided into professional and technical services, is the declaration of the American Medical Association.
11. It is unethical to pay to have one's name listed in special medical directories whose publishers claim that such listings are used by insurance companies in referring patients. The Judicial Council has declared this to be the solicitation of patients. Further, that it is a racket and a "come on" game at the expense of doctors.
12. Do not sign a contract until you are informed as to its legal provisions and your legal obligations.

* * *

COMMITTEE APPOINTMENTS

Membership on special and standing committees of the Association are designated by the Council and confirmed by the House of Delegates. In this, as in every issue of our official journal, members will find the personnel of all committees listed in the front advertising section. Consult that listing and become informed as to who are obligating themselves to render special service to all our members.

Assignments to and acceptance of committee membership is not an idle honor. It is a definite obligation and pledge to contribute thought, time, and labor to accomplish that for which the committee was created and aid in accomplishing Association purposes and functions. Committees function in behalf of membership and public interests. Committees are entitled to the support and assistance of all members. Committees lead by formulating recommendations and policies. Committee accomplishments are accentuated and achieved in the fullest degree when all members enroll their support.

We confidently look forward to a year of desired action on the part of all committees.

* * *

SIXTY-FIFTH ANNUAL SESSION

Our Association's history has been enriched by the transactions and events of our sixty-fifth annual session that was held in Coronado on May 25-28, 1936. The registration was 1,594, and would have reached the 2,000 mark had everyone in attendance registered.

Coronado and San Diego have bequeathed to our members many happy memories of former meetings. This bequest has been enriched by that pleasant environment, a hospitable local profession, and a hotel management alert to our needs and comforts.

This issue contains the official minutes. Every member *is urged to read the official transactions,* to study them and to conform to the policies established. This comment will be confined to certain general details. It is not intended to supplant the reading of the official minutes.

Conference.—By Council action all of the standing and special committees met in general conference on Sunday afternoon. Association activities and future problems were presented. The conference concluded with the chairmen holding meetings of their respective committees. This innovation will go far in intensifying committee activity and accomplishments.

County presidents and secretaries joined the Council at luncheon on Tuesday for informal exchange of experiences. It was determined to hold the annual secretaries' conference in late November, after the election and before the legislature convenes.

Council.—The Council held five meetings. Its minutes are contained in this issue. At the Thursday Council reorganization meeting, the following officers were elected: Morton R. Gibbons, chairman; Junius B. Harris, vice-chairman; Karl L. Schaupp, chairman of Auditing Committee; F. C. Warnshuis, secretary-treasurer; Hartley F. Peart, legal counsel; Hubert T. Morrow, associate legal counsel; and George H. Kress, editor. Chairman Gibbons appointed the following Auditing Committee: Karl L. Schaupp, O. D. Hamlin, and T. Henshaw Kelly.

1937 Meeting Place.—The Council recommended, and the delegates approved, Del Monte as the place for holding our 1937 meeting. The exact date will be determined at the next Council meeting.

Scientific Program and Exhibits.—The members are referred to the minutes, which contain the recommendations of this committee.

Malpractice Insurance.—The complete report of this committee is to be found in the minutes together with the action of the House of Delegates.

House of Delegates.—The presiding ability of the Speaker, W. W. Roblee, and the excellent work of the two reference committees expedited the work of the House of Delegates. Delegates were well informed upon reports and pending questions. This fact obviated long explanatory statements and debate. Informed conscientious delegates are able to record sound action and policies. Speaker Roblee and Vice-Speaker Graves were reëlected to office. Councilors Phillips, Howson, Schoff, Tanner, and Kelly were reëlected. Dr. Howard A. Morrow was elected president-elect without contest.

Those in attendance were loath to depart homeward, for the comment, "The best meeting in twenty-five years," was a general expression. We shall soon return to Coronado for our annual meeting.

* * *

PRINCIPLES OF ETHICS

Article IV is an important section of our Principles of Ethics. Observing it will prevent misunderstandings.

Article IV. Duties of Physicians in Cases of Interference

CRITICISM TO BE AVOIDED

Section 1. The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder; nor should the course of conduct of the physician, directly or indirectly, tend to diminish the trust reposed in the attending physician. In embarrassing situations, or wherever there may seem to be a possibility of misunderstanding with a colleague, the physician should always seek a personal interview with his fellow.

SOCIAL CALLS ON PATIENT OF ANOTHER PHYSICIAN

Sec. 2. A physician should avoid making social calls on those who are under the professional care of other physicians without the knowledge and consent of the attendant. Should such a friendly visit be made, there should be no inquiry relative to the nature of the disease or comment upon the treatment of the case, but the conversation should be on subjects other than the physical condition of the patient.

SERVICES TO PATIENT OF ANOTHER PHYSICIAN

Sec. 3. A physician should never take charge of or prescribe for a patient who is under the care of another physician, except in an emergency, until after the other physician has relinquished the case or has been properly dismissed.

CRITICISM TO BE AVOIDED

Sec. 4. When a physician does succeed another physician in the charge of a case, he should not make comments on or insinuations regarding the practice of the one who preceded him. Such comments or insinuations tend to lower the esteem of the patient for the medical profession and so react against the critic.

EMERGENCY CASES

Sec. 5. When a physician is called in an emergency and finds that he has been sent for because the family attendant is not at hand, or when a physician is asked to see another physician's patient because of an aggravation of the disease, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the family physician after he has reported the condition found and the treatment administered.

WHEN SEVERAL PHYSICIANS ARE SUMMONED

Sec. 6. When several physicians have been summoned in a case of sudden illness or of accident, the first to arrive should be considered the physician in charge. However, as soon as the exigencies of the case permit, or on the arrival of the acknowledged family attendant or the physician the patient desires to serve him, the first physician should withdraw in favor of the chosen attendant; should the patient or his family wish some one other than the physician known to be the family physician to take charge of the case the patient should advise the family physician of his desire. When, because of sudden illness or accident, a patient is taken to a hospital, the patient should be returned to the care of his known family physician as soon as the condition of the patient and the circumstances of the case warrant this transfer.

A COLLEAGUE'S PATIENT

Sec. 7. When a physician is requested by a colleague to care for a patient during his temporary absence, or when, because of an emergency, he is asked to see a patient of a colleague, the physician should treat the patient in the same manner and with the same delicacy as he would have one of his own patients cared for under similar circumstances. The patient should be returned to the care of the attending physician as soon as possible.

RELINQUISHING PATIENT TO REGULAR ATTENDANT

Sec. 8. When a physician is called to the patient of another physician during the enforced absence of that physician, the patient should be relinquished on the return of the latter.

SUBSTITUTING IN OBSTETRIC WORK

Sec. 9. When a physician attends a woman in labor in the absence of another who has been engaged to attend, such physician should resign the patient to the one first engaged, upon his arrival; the physician is entitled to compensation for the professional services he may have rendered.

Article V. Differences Between Physicians

ARBITRATION

Section 1. Whenever there arises between physicians a grave difference of opinion which cannot be promptly adjusted, the dispute should be referred for arbitration to a committee of impartial physicians, preferably the Board of Censors of a component county society of the American Medical Association.

SUGGESTIONS REQUESTED

The conducting of an annual meeting demands personal attention to many details. There is but one uppermost thought—to meet, in so far as possible, the comfort and pleasure of those in attendance in order that they may derive the greatest benefits from the scientific program.

The Scientific Program Committee is eager to receive suggestions as to how improvements can be made. Will you not send your comments and suggestions to the State Secretary?

* * *

HOTEL RESERVATIONS AT DEL MONTE

All hotel reservations on the Monterey peninsula for our 1937 annual session will be made through Mr. Carl Stanley, manager, Del Monte Hotel, Del Monte, California. Reservations will be confirmed in the order of receipt.

* * *

The Tactics of Opposition

1. *Be Noisy*

If the majority favors a plan, support it, but rage vociferously at the methods of the administration. Covertly obstruct. (This is called "deep stuff.")

2. *Make Lots of Noise*

Propose other plans. The more plans the greater confusion. (This is called "smoke screen.") If possible gather support for a plan that will defeat the whole movement. (This is called "counter-movement.")

3. *Be Loud*

Try to divide the supporters of the movement that you wish to obstruct or destroy. (This is called "the split.")

4. *Yell and Rage*

Challenge the sincerity of any or all leaders of the other side. (This is called "vilification.")

5. *Bewail*

Place yourself in a position where you may get bumped. Scream and cry at the terrible injury. This will excite some sympathetic support. (This is called "the squawk.")

6. *Roar*

Keep everybody as mad as possible. (This is called "inciting unrest.") Be quite careless with the truth, if necessary. Few take the trouble to investigate inflammatory allegations. (This is called "stretching it.")

7. *Rave*

Threaten and bull-doze. (This is called "throwing a scare" or "putting on the heat.") Occasionally let loose a dire prediction. The latter goes well. (This is called "auguring ill.")

8. *Moan and Groan*

Wear an air of deep suffering. (This is called "martyrdom.")

9. *Yawp*

When you see that the fight is hopeless, that the others are surely going to win out and that your cause is lost, claim all the credit. (This is called "getting on the bandwagon.")

10. *Side-Step*

Start something else. (This is called "staging a comeback.")—*Oregon Medical Reporter.*

Basic Science.—The importance of physiology and biochemistry in the mental equipment of the internist has been long conceded. Dr. Roscoe R. Graham, writes: "While skill must be an asset to the surgeon, yet if not accompanied by the knowledge and appreciation of the biochemical, physiologic, and psychologic disturbances inseparable from all disease processes, the results of such surgical procedures will leave much to be desired. Such an individual is merely an operator, a technician, carrying out stereotyped procedures—not a surgeon. The training of a surgeon has now become so complicated that the former presumably adequate knowledge of anatomy and surgical pathology must be supplemented by a training in biochemistry and physiology. To these sciences we are deeply indebted.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS[†]

County Hospitals

The following letter indicates what a member may accomplish by way of causing laymen to perceive facts bearing upon county hospitals:

May 20, 1936.

Dear Doctor Warnshuis:

After my conversation with you, I spoke before the Alhambra Farm Bureau last night on the doctors' side of the County Hospital Initiative. Mr. Anthony Crafton explained and advocated the initiative before I spoke. I had an audience of sixty very intelligent farmers and they were well impressed when I said the only objection the doctors had was that it would get in the hands of politicians and that we were absolutely opposed to the way it has been handled in Kern County. What the Farm Bureau advocates and thinks the act amounts to is quite a harmless affair that will allow the very poor, who cannot be classed as indigents, to get county hospital service for a small fee and that this would only be done through the social service investigators. All agreed with me that the act should be defeated if it would ruin the doctors or be made a political football. I told them that our experience has shown that the supervisors have taken advantage of it for politics and have erected extravagant county hospitals and the tax rate has been increased in those counties. I asked that they consult and work in coöperation with the Public Relations Committee of our County Medical Society and they said they would.

Many of the members of the Farm Bureau have bought stock in our local hospital and they insist that its future is more important than the initiative. They also want to have the local doctors secure and not under the mercy of the politicians. All were in favor of the act and most signed the petitions, but I think it will be easy to switch them over by November. I did not take a hostile attitude, and I think I made a good impression. They promised that they would see to it that it would be no political football and that the doctors would be safeguarded. I think that if we had reliable statistics we could easily convert them.

Sincerely,

(Signed) John L. Beard, M. D.

713 Main Street, Martinez.

County societies, through officers and committees, are requested to contact supervisors, granges, and farm bureaus and impart to their members actual facts. County hospitals management and administration must be removed from politics and taken out of the hands of politicians. Success in accomplishing this lies in the hands of all of our members. Every member must bend to the task and educate his patients and friends to oppose this political control of county hospitals.

* * *

Hospital Insurance

The House of Delegates of the American Medical Association at its Kansas City meeting went on record in endorsing the policies and principles adopted by the Department of Public Relations and the Council of the California Medical Association. The American Medical Association declared laboratory and x-ray services to be medical services and as such should be under the control of the medical profession. The American Medical Association also went on record in disapproving the invasion of medical practice by hospitals.

At the Coronado meeting our House of Delegates established a like policy, as will be seen by the report of the Reference Committee. There can now be no question as to Medicine's position in regard to this question as it relates to hospital insurance and the practice of medicine by hospitals.

[†] The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

COMPONENT COUNTY MEDICAL SOCIETIES

HUMBOLDT COUNTY

The Humboldt County Medical Society held their regular monthly meeting on the evening of June 3 at Saint Joseph's Hospital, President Woolford presiding. Twelve members were present.

We had as our guest, Dr. Joseph McCool of San Francisco, who spoke to us on *Strabismus as to Etiology and Treatment*. Doctors Holm, Gross and Charles Falk, Jr., discussed the paper.

Lawrence A. Wing, *Secretary*.

⁂

SAN JOAQUIN COUNTY

The regular monthly meeting of the San Joaquin County Medical Society was held in the Medico-Dental clubroom, Stockton, at 8:15 p. m., June 4. The meeting was called to order by President T. C. O'Connor.

The regular meeting was preceded by the customary supper meeting at the Hotel Wolf, at which twenty-seven guests and members were present. The paper at the supper meeting was given by Dr. C. A. Broaddus, who talked on *Balance of Eye Muscles*.

The minutes of the preceding meeting were read and accepted. The petition of Dr. Leo D. Smith for membership in the San Joaquin County Medical Society was passed on favorably by the Admissions Committee, and there being no objections from the floor, he was declared a member as of July 1, 1936. The petition of Dr. Henry C. Rixford for membership to the San Joaquin County Medical Society was presented and referred to the Admissions Committee.

Doctor Doughty spoke on the response obtained from the members for speakers for the Speakers' Bureau, and stated he would have speakers available for use any place in San Joaquin County.

Doctor Gallagos submitted a report for Doctor Kyddson, chairman of the Immunization Committee, who was not present. He stated that the Health Department would coöperate with the doctors by furnishing vaccines, but would not be able to allow any fees for those who could not pay physicians' fees. The nurse would contact the homes as usual and refer the parents to the family physician. He also stated that the monthly *Health Review* would have a slip attached, which Doctor Sippy requested the physicians to fill out if they had immunized any children, so the records of the Health Bureau might be complete.

Doctor Gallegos then reported on the formation of a mothers' clinic or birth control clinic started at the San Joaquin County General Hospital, Monday, June 8.

Delegates Broaddus and Powell reported on the recent convention at Coronado, and were of the opinion that the more populous counties had failed to give the less populous counties due consideration in their fight against the encroachments of the county hospitals on private practice of medicine.

The paper of the evening was presented by Ben Read, secretary of the Public Health League, who commented very forcibly on legislation impending and past. He told of the work of the League and stated they were organizing for the coming fights at the November election. Dr. Junius Harris, councilor of the California Medical Association, spoke on the problems confronting medicine in the State of California. Both of these papers and the reports of the delegates caused much lively discussion from the floor, many of the members entering into the comments.

After the discussion was closed, Dr. Dewey Powell moved that the activity of the San Joaquin County Medical Society on the impending fight against the County Hospital Bill be referred to the Board of Directors for formulation of plans and that the Society abide by these plans. This was seconded from the floor and the motion carried.

G. H. Rohrbacher, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (23)

Contra Costa County.—Robert J. P. Harmon, Leon E. Mermod.

Fresno County.—Joseph R. Smith.

Kern County.—Henry A. Rivin.

Orange County.—Willard I. Covault, Wayne A. Harris.

Riverside County.—Helen S. Clark, Glenn A. Westphal.

Sacramento County.—Lung Fung, Glenn E. Millar, Leslie A. Runyan.

San Benito County.—Robert S. Geen, John J. Haruff.

San Diego County.—A. Antonio DaCosta, H. Lee Fuller.

San Francisco County.—Frances Baker, Charles S. Capp.

San Mateo County.—Harry E. Mason, Wendell H. Musselman, Frances R. Watson, Homer H. Whitney.

Santa Clara County.—Anthony T. Sunzeri.

Tulare County.—Frank L. Wiens.

In Memoriam

Beckett, Wesley Wilbur. Died at Los Angeles, June 3, 1936, age 79. Graduate of University of Southern California School of Medicine, Los Angeles, 1888. Licensed in California in 1889. Doctor Beckett was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✠

Brendal, Frank Philip. Died at Sacramento, May 24, 1936, age 48. Graduate of the University of California Medical School, San Francisco, 1917, and licensed in California the same year. Doctor Brendal was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and a Fellow of the American Medical Association.

✠

Doig, Robert Peeper. Died at San Diego, May 9, 1936, age 81. Graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1880. Licensed in California in 1894. Doctor Doig was a retired member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.

✠

Kirkpatrick, John L. Died at Los Angeles, May 17, 1936, age 62. Graduate of the University of Southern California Medical School, Los Angeles, 1899, and licensed in California the same year. Doctor Kirkpatrick was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✠

Lackey, Howard Julian. Died at Oakland, May 15, 1936, age 63. Graduate of Hahnemann Medical College and Hospital of Philadelphia, 1899. Licensed in California in 1900. Doctor Lackey was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✠

Lagan, Edward. Died at San Francisco, May 17, 1936, age 68. Graduate of the University of California Medical School, San Francisco, 1891. Licensed in California in 1892. Doctor Lagan was a member of the San Francisco County Medical Association, the California Medical Association, and the American Medical Association.

✠

Miner, Lucien Luttrell. Died at Los Angeles, June 5, 1936, age 58. Graduate of Columbia University College of Physicians and Surgeons, New York, 1904. Licensed in California in 1926. Doctor Miner was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✠

Moore, Thomas Verner. Died at San Jose, June 6, 1936, age 53. Graduate of Creighton University School of Medicine, Omaha, 1911. Licensed in California in 1913. Doctor Moore was a member of the Santa Clara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES

Campbell Palmer Howard

1877-1936

Our members in attendance at the Coronado session gained and retained a most impressive opinion of one of the guest speakers, Dr. Campbell P. Howard, who conducted the Clinico-Pathological Conference at the second general meeting.

After the meeting Doctor Howard went to Los Angeles for a short visit with friends in Santa Monica. On June 3, near the approaching evening, he was seized with a sudden cardiac pain and expired in five minutes. His body was returned to Montreal.

Doctor Howard was born April 2, 1877. He obtained his B. A. in 1897 in McGill, and his M. D., C. M., in 1901 from the same university. He served his internship in Johns Hopkins, under Dr. William Osler. The years of 1902 to 1906 were spent in Europe in study. From 1910 to 1924 he was professor of medicine in the University of Iowa. Since then he has held the chair of clinical medicine in McGill University.

Doctor Howard was a frequent contributor to medical publications and collaborator in Osler's practice, Nelson's and Forscheimer's systems.

Upon his death the Association's condolences were wired to his family. The members of the California Medical Association regret the departure of this medical scientist and leader. Our regret is keener by reason of the fact that his end came shortly after his enjoyable and stimulating hours with us at Coronado as the guest speaker and leader in the Clinico-Pathological Conference at the Coronado annual session of the California Medical Association.

Wesley Wilbur Beckett

1857-1936

In the death of Dr. Wesley Wilbur Beckett, which occurred on June 3, 1936, the California Medical Association lost its president of 1909.

Born in Oregon seventy-nine years ago, of pioneer stock who crossed the plains, Doctor Beckett came to California at an early age, finally settling in San Luis Obispo County, teaching school there and afterward filling the position of assistant superintendent of schools.

In 1885 he entered Cooper Medical College, taking his first year there, but going to the University of Southern California for his last two years, graduating from that school in 1888, a member of its first class and becoming one of its most distinguished alumni.

Doctor Beckett built up a large practice in Los Angeles, and was recognized as one of its ablest surgeons. He filled many positions of honor and trust. He was president of the Southern California Medical Association in 1901, Los Angeles County Medical Association in 1904, Clinical and Pathological Society of Los Angeles in 1906, California Medical Association in 1909, and of the Association of Life Insurance Medical Directors in 1926. He retired from practice many years ago to give his entire attention to his position as medical director of the Pacific Mutual Life Insurance Company, an office which he had already occupied for some years previously. He was a vice-president of the company.

Doctor Beckett was always keenly interested in medical education. He became a trustee of the University of Southern California in 1895, a position which he held until his death. He occupied the chairs of obstetrics and gynecologic surgery at one time or another in the early school, but his greatest work in this connection, and what is probably his greatest monument, is the reorganization and reopening of the medical department of the University of Southern California in 1928. The University had conferred upon him the degree of LL. D. in 1927, "in recognition of his service in medical education."

In the passing of Doctor Beckett the city of Los Angeles has lost a distinguished citizen, the Los Angeles County Medical Association one of its oldest and one of its most valued members, the University of Southern California one of its ablest officers and most distinguished graduates, and the State Medical Association a valued and respected colleague.

Doctor Beckett was a man of warm personality, a sincere friend, a wise counselor, and a man of many benefactions.*

If you would live well in this world, strive to gain wisdom and to perfect your relations with your fellow men.—Leon J. Richardson.

THE WOMEN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

MRS. ANDREW J. THORNTON..............................President
MRS. ROBERT M. FURLONG..
....Editor and Chairman of Publicity

Report of the President

Dear Fellow Members:

A year ago I stood before the group of Auxiliary members who had assembled in session in Yosemite Valley and promised to fulfill the duties allotted to this office to the best of my ability. I have made every effort possible to do this.

In thinking over the situation on the start, I wondered, considering the very capable women who had preceded me, if there was anything left for me to do but to just oil the machinery. I was also reminded of an article that I had once read, entitled "These I Will Keep." The woman who had written it, instead of making New Year's resolutions at the beginning of the year, was taking stock of what was worth while in her life and deciding what she would keep.

We have been organized seven years. Each year has brought in its quota of progress, and as the years go on this should be the case. Each president finds some piece of work that especially appeals to her and that she considers important. As she approaches her year's work she needs to consider the outlook as a whole, selecting the most important activities and to herself say, "These I will keep."

I have not called my part in this program a report. I am leaving reports of the year's work to the chairmen and county presidents, believing that they should enjoy to the utmost the recountal of their own accomplishments. I can say that the work done by them has been of splendid value and that we may all be rightfully proud of their achievements.

Two weeks after our Yosemite convention last year, I left for our National convention at Atlantic City. That sounds like ancient history now and I shall not give you any details of that trip. Many of you have read my report of the activities of that convention. I want to say if any of you have just a lukewarm interest in our organization, I urge you to attend a National convention and become an enthusiast. It is stimulating to meet those interested women, hear reports from all over the United States and to mingle with that large Auxiliary group, remembering that we are all united for one purpose—the promotion of scientific medicine. I am so happy that Mrs. Thornton could enjoy the National convention just before taking up her duties as state president.

Believing that personal contact is a strong factor in helping the counties to realize that they are an important link in a larger organization, I made an effort to visit all the counties. California now has a total of seventeen organized counties. I visited and addressed fifteen of these counties. This meant miles of travel. Our counties are scattered all along the line from Siskiyou near the northern state boundary line to San Diego, a distance of seven hundred miles. Orange and Riverside, the two counties that I did not reach, were dated for an early visit in February, when I was to go south for a Board meeting. A telegram from our National president, Mrs. Herbert, saying that she would be in Oakland on these dates and in Los Angeles a little later in the month, caused us to change the date of our Board meeting, so I missed their meeting days. I was sorry indeed, but the nice president of Orange County, Mrs. Green, said that I would be just as welcome as a "past." So that is a leftover to which I shall look forward.

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* See also item in June CALIFORNIA AND WESTERN MEDICINE, page 536.

† As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Robert M. Furlong, chairman of the Publicity and Publications Committtee, Linden Lane, San Rafael. Brief reports of county auxiliary meetings will be welcomed by Mrs. Furlong and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

It has been thrilling to have five new counties join us this year. On each occasion Mrs. Sargent has done the organizing. It gave me a feeling of satisfaction to visit these groups. Two of these counties are small and isolated: one is Lassen-Plumas, up in the high Sierra; the other, Siskiyou County. Both have fine, interested members. Marin is rather small in numbers, but I consider them just about ideal in the way they carry on their work. Fresno is another fine group. I did enjoy my trip to Fresno. The doctors' wives are the leaders in all civic affairs—fine public relations work, I would say. San Francisco has joined us, with a membership of two hundred. They are making splendid progress and, with all the opportunities that San Francisco has to offer, they will soon be making great strides.

By these contacts I have made rare friendships, and I hope that I may have been the medium through which the friendship of the state at large was brought home to them.

It was an enjoyable event this year to have our National president, Mrs. Rogers N. Herbert, visit our state. It is the first time that a National president has come to the West for a visit. Her first stop was in Oakland, where a luncheon was given in her honor, which the other northern counties were invited to attend. Representatives from six counties were present. Mrs. Herbert has a most pleasing personality, and her thrilling address was much appreciated by all present. She was also entertained in San Francisco, the guest of Mrs. Geiger. Later on in the week we had the pleasure of having Mrs. Herbert attend our State Board meeting in Los Angeles. That afternoon we all attended a very delightful tea arranged by Mrs. Barrow and sponsored by the Los Angeles group. Mrs. Herbert addressed this group also.

San Francisco and Alameda County women played an important part in the entertainment of the wives of the surgeons who convened in San Francisco in November. The Auxiliary members in Sacramento entertained the visiting physicians' wives at the annual meeting of the California Tuberculosis Association held in Sacramento in April.

During the year we have held our two Board meetings. The September meeting was held in Oakland, and the February meeting in Los Angeles. Fourteen members attended each meeting. Considering the long distance that some women had to go to attend the meetings, I was certainly pleased to have that number. We all enjoyed having Doctors Pallette and Barrow as guest speakers at the Los Angeles meeting.

It has been a great joy to work with the women who constitute my board. I am not trying to flatter when I say that it would be hard to find a group of women who would be so considerate and kind, coöperating in every way possible and doing, each one, her special line of work to the best of her ability. I treasure the friendships made among my board members.

In the reports you will hear in detail about our first Public Health Institute. The fact that it was given by my own county and in my own city was very gratifying to me. Also that it was such a successful venture .

I believe that Los Angeles County, under the leadership of Mrs. Barrow, has accomplished a most constructive piece of work—that of forming the assembly districts. This is of such importance that it cannot be ignored by the other counties. Fresno and Orange have followed the good examples of Los Angeles, and I hope by this time next year most of the other counties will do the same.

In talking with the members throughout the state, I was surprised to find that so many were a little vague as to what our *Courier* really is. In case there are some here today who do not know, let me say that it is the news sheet for the State Auxiliary, edited by our publicity chairman and published twice a year. An effort is made to have it reach every Auxiliary member. The cost is taken care of by the State. Last year it made its appearance for the first time, and as a single sheet. This year it has doubled its size. We have been commended very highly for this venture by National, who has suggested that more states follow our example.

I just cannot help but put in my little word about *Hygeia*. Such a wonderful magazine to put before the public to help strengthen our purpose! I wish to congratulate the smaller auxiliaries on their successful work with *Hygeia*. It is a noticeable fact that the smaller counties have made a much better showing than the larger counties in their promotion of *Hygeia*. I wish every one of you would go home from this convention with the determination to do your part to see that it has a larger circulation in your county.

We are closing our year on a good financial basis. We have not exceeded our budget. We have enjoyed the coöperation and support of the State Medical Advisory Committee at all times.

One of my ambitions this year has been to stress coöperation and friendship, without which no organization can reach its goal. My personal visits and the many letters written to officers and county presidents have helped to keep us in friendly accord.

It is my earnest wish that the members throughout the state will extend to Mrs. Thornton the same friendly gestures and coöperation that I have enjoyed. Let me say, in closing, that all through the year I never once forgot to oil the machinery. It has been a pleasure to serve my State. I thank you.

Mrs. Thomas J. Clark.

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In Memoriam*

As we are enjoying this seventh annual convention, meeting old friends and renewing acquaintanceships made at previous ones, we are missing certain members who will never meet with us again nor with their own county societies, for during the past year they have been called "home," and we pause in our busy program to hold them in loving remembrance.

As fellow members they graciously made their contributions in many different ways. We are indebted to them and we miss them.

Let us turn, though, from the sadness of broken friendships to the consolation of happy memories and to the inspiration of their loyalty to and interest in our Auxiliary work.

There is much ahead of us now to be done—many lines of activity in this our work as doctors' wives, which challenge the best we have to give.

With the thought of these faithful ones in mind, and with the knowledge that time is fleeting, can we not best honor their memory by striving with enthusiasm toward those ideals which they held in common with us, and help advance the true light of scientific medicine in our spheres of activity?

Deceased Members—1935-1936

Alameda County—Mrs. C. G. Browne and Mrs. Daniel Crosby, both of Oakland.

Contra Costa County—Mrs. J. N. Bumgarner of Richmond.

Los Angeles County—Mrs. George K. Dasey of Santa Monica, Mrs. Franklin M. Dryden of Pasadena, Mrs. Vernon O. Heddens of Pasadena, and Mrs. Mary A. Smith of Whittier.

Marin County—Mrs. Carl W. Clarke of Ross.

San Diego County—Mrs. C. S. Marsden of San Diego.

If mankind were to make full use of its present knowledge of personal and public health, the expectancy of life could be increased from its present span of sixty years to seventy-five years, with a corresponding increase in personal happiness and efficiency, Dr. Dean Franklin Smiley, director of the Cornell University health service, told the Public Health Nursing Association of Rochester at a recent meeting.—*New York State Journal of Medicine*, February 15, 1936.

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* Report made by Mrs. J. C. Condit.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column: California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

Pacific Northwest Medical Association, Portland, Oregon, July 8-11, 1936. C. W. Countryman, Medical and Dental Building, Spokane, secretary.

Pan-Pacific Surgical Congress. Honolulu, Hawaii, August 6-14, 1936. George W. Swift, M. D., 902 Boren Avenue, Seattle, Washington, president.

Medical Broadcasts*

The American Medical Association broadcasts have been discontinued for the summer months. A new series is under consideration for the autumn and winter of 1936-1937.

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San Francisco County Medical Society.—The radio broadcast program for the San Francisco County Medical Society for the month of July is as follows:

Tuesday, July 7—KYA, 6 p. m.
Tuesday, July 14—KYA, 6 p. m.
Tuesday, July 21—KYA, 6 p. m.
Tuesday, July 28—KYA, 6 p. m.

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Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of July is as follows:

Saturday, July 4—KFI, 9 a. m. Subject: The Road of Health.
Saturday, July 4—KFAC, 10:15 a. m. Subject: Your Doctor and you.
Tuesday, July 7—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, July 11—KFI, 9 a. m. Subject: The Road of Health.
Saturday, July 11—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, July 14—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, July 18—KFI, 9 a. m. Subject: The Road of Health.
Saturday, July 18—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, July 21—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, July 25—KFI, 9 a. m. Subject: The Road of Health.
Saturday, July 25—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, July 28—KECA, 10:30 a. m. Subject: The Road of Health.

Alpha Gamma Mu Alpha.—A new society was born at Kansas City during the recent American Medical Association meeting—the A. G. M. A. (Alpha Gamma Mu Alpha), a postgraduate medical fraternity; secret, of course. Its object is to promote thought. It has no dues. Initiation fees are $1. Its members must belong to their County, State, and American Medical societies. Its meetings are held when and where the American Medical Association meets.

Its officers are: President, Arthur E. Guedel, 613 North Elm Drive, Beverly Hills, California; secretary-treasurer, LeRoy S. Peters, National Bank Building, Albuquerque, New Mexico; delegate, John W. Shuman, 3780 Wilshire Boulevard, Los Angeles, California.

Dean E. P. Lyon of the University of Minnesota Retires.—At the close of the present academic year, Dr. E. P. Lyon, Dean of the Medical School, retires from active service at the University of Minnesota. During his administration, covering a period of twenty-three years, the Medical School has exhibited steady and continued growth. As a fitting tribute to his stimulating leadership, the alumni and faculty of the Medical School propose to establish in his honor the Elias Potter Lyon Medical Lectureship at the University of Minnesota. The fund for this purpose is to be raised through subscriptions by alumni, faculty, students, and friends. Contributions to the Lyon Lectureship fund may be sent to Mr. William T. Middlebrook, Comptroller, University of Minnesota, Minneapolis.

Corrections in the U. S. P. XI.—Since the appearance of the new Pharmacopeia in December of 1935, the text has been subjected to intensive review and some corrections have been found necessary. In so far as these cover typographical errors or accidental inaccuracies, authority has been given to publish the list of corrections in pharmaceutical and medical journals.

Purchasers of the new Pharmacopeia may also obtain a printed list of these corrections for insertion in their copies of the United States Pharmacopeia. Send a three-cent stamp to cover postage to the publishers of the Pharmacopeia, the Mack Printing Company, Easton, Pennsylvania.

Questions have also arisen concerning certain pharmacopeial assays or tests, and these are under investigation. In those cases where it becomes desirable to revise any of the printed monographs such changes will be announced by "Interim Revision" procedure.

Industrial Accident Commission: Safety Department.—The committees that have been considering the Mine Safety Orders met in Los Angeles on May 25, 1936, and in San Francisco on June 4, 1936. The orders have been revised in accordance with the suggestions received at previous meetings of the committees and from other sources.

On May 27, 1936, the State Traffic Safety Advisory Committee met in the Biltmore Hotel, Los Angeles.

The second annual meeting of the Western Safety Conference will be held at Salt Lake City on September 21, 22, 23, and 24, 1936. The reports from B. D. Nebeker, Industrial Commissioner of Utah, are that twenty-two safety organizations have joined hands in making this an outstanding meeting.

In addition to the eleven western states (California, Oregon, Washington, Idaho, Montana, Nevada, Colorado, Arizona, New Mexico, Wyoming, and Utah) Baja California, British Columbia, and Hawaiian Territory have been invited to participate.

The Department of Public Health has released the figures for accidental deaths in California for 1935. Of the 477 occupational deaths listed, 142 were due to trade, 88 to agriculture, 67 to construction, and 60 to transportation and public utilities. Mining and quarrying were responsible for forty-eight deaths.

The necessity of each individual knowing how, when and where to swim is forcibly brought to light by the fact that 324 persons were drowned during the year. In the homes there were 251 deaths from conflagrations, burns and explosions, and falls killed 805; of the latter, 596 were to persons of sixty-five years or over.

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* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Fewer Homicides in California.—During 1935 there were forty fewer homicides than in 1934. There were registered with the California State Department of Public Health 435 homicides in 1934 as compared with 395 in 1935. Of the 395 such events that were recorded last year, 337 were murders and 49 were justifiable homicides, 30 by police officers and 19 by other individuals.

Most homicides are caused by firearms. Relatively few are caused by cutting and piercing instruments. The ready availability of firearms probably constitutes the most important factor in the production of homicides.

Out of 395 homicides reported last year 117 were in Los Angeles and 29 in San Francisco. There were 11 in Sacramento, 9 in San Diego, 7 in Stockton, and 7 in San Bernardino. The remainder were scattered throughout the state.

It will be noted that an average of more than one homicide occurs in California for every day in the year.

Federal Emergency Administration of Public Works in California.—The Public Works Administration program in California has reached a volume of 395 non-federal projects representing a total estimated cost of approximately $136,000,000, according to a special report made recently to A. D. Wilder, State Public Works Administration Director, 1210 Hewes Building, San Francisco.

That the Public Works Administration has spread a blanket of employment activity in the federal and non-federal divisions of its program over the entire fifty-eight counties of California, is the additional information contained in the report confirmed by the Public Works Administration's Division of Economics and Statistics in Washington.

Of the 395 non-federal projects widely distributed in California, 119 are entirely completed; 233 are in process of completion; and 43 are ready to start, excepting for a few details in the thorough preliminary preparations. A large proportion of the projects being built are nearly finished.

The number of projects and the amount of the total investment are about evenly divided between Northern California and Southern California. The bulk of the millions invested in the Public Works Administration permanent projects in California is in public school buildings, which comprise more than $58,000,000, or 43 per cent of the entire program.

The total number of projects is not regarded as truly representative of the magnitude of the work in California, in the opinion of the Public Works Administration officials. They state there are several multiple projects and cite as an illustration a single project in Los Angeles which includes four hundred school buildings.

A. D. Wilder, State Public Works Administration Director, emphasizes the fact that, of the estimated cost of $136,000,000 for the non-federal projects for California, the sum of $70,000,000 was put up by Uncle Sam's partners, in the shape of California's county and city governments, school or irrigation districts, or other similar bodies; and the balance of $66,000,000 by the Federal Government.

"The coöperation and teamwork between the Federal Government and the numerous local units of government in this Public Works Administration program in California has been most harmonious and effective," said Mr. Wilder. "In some instances, 70 per cent of the amount was provided locally; on other projects, 55 per cent of the estimated cost was borne by the authorized political or private unit.

"California Public Works Administration program has not only given employment to thousands of men and women on the sites of the projects, but the material orders have given employment to innumerable more thousands in the durable goods industries in this state and other states. California's part in the national program has been a mighty factor in stimulating additions to numerous payrolls in the heavy goods industries in the mid-West and East. Millions of California's and the Federal Government's dollars have bought materials to build enduring and beneficial public works in this state, as well as being the cause of hiring more employees on transportation systems and like auxiliary activities."

Julius Rosenwald Fund Report.—At the regular spring meetings of the Julius Rosenwald Fund concluded yesterday its trustees expressed gratification at the accomplishments of the Fund in coöperation with other agencies in making good medical care more available to people of small means. They expressed their continued interest in medical economics and their desire that programs in this field be carried forward effectively. During the past year plans for making medical care more available to people of small means have grown substantially. Voluntary insurance to lower the cost of hospital care—group hospitalization—has doubled now, covering some 350,000 persons, with plans being established monthly in new communities. . . . The Julius Rosenwald Fund, 4901 Ellis Avenue, Chicago, Illinois, will continue to assist in the extension of the insurance principle in relation to hospital service, in scientific studies concerning the cost and the organization of medical care and in the education of qualified personnel for studying and administering hospitals and clinics.

Federal Emergency Administration of Public Works. When one new employee is hired on a PWA project, four and a half new employees are added to the payrolls of industries supplying materials for that project, according to a survey received today by A. D. Wilder, State Public Works Administration Director, 1210 Hewes Building, San Francisco.

The special report was made to the California Public Works Administration state office by the United States Bureau of Labor Statistics in the Department of Labor, which had completed a study of a cross section of Public Works Administration operations in the form of six completed power projects which shows "that the indirect labor in relation to direct labor was four and one-half to one."

"We cannot place too much emphasis on the importance of the vast amount of indirect labor which is created by projects of the Public Works Administration in California," said State Public Works Administration Director, A. D. Wilder. "Our off-site employment is greatly in excess of our direct labor and equally, if not more, beneficial. Such facts are well shown by this special survey by the Department of Labor."

American College of Surgeons: Clinical Congress.—The twenty-sixth annual Clinical Congress of the American College of Surgeons will be held in Philadelphia, October 19-23, 1936, with headquarters at the Bellevue-Stratford Hotel. This will be the fifth congress in Philadelphia, and the American College of Surgeons is looking forward with great interest to viewing again the work of colleagues in that great medical center with its many fine hospitals, splendid schools, and large group of outstanding clinicians.

The Philadelphia Committee on Arrangements is planning a clinical program which will provide a complete showing of the surgical activities at the five medical schools and more than thirty hospitals that will participate. All branches of surgery will be represented therein. Among the special features of the clinical program are: (1) Cancer clinics, demonstrating treatment by surgery, radium and x-ray; (2) fracture clinics, presenting modern methods of treatment; and (3) clinics in traumatic surgery, demonstrating the newer methods of rehabilitation of the injured. A preliminary clinical program is presented in the current issue of *Surgery, Gynecology, and Obstetrics,* and in the June *Bulletin* of the College.

The Congress opens on Monday morning, October 19, with the annual hospital conference. On Monday evening, at the presidential meeting, the new officers will be inaugurated. The address of the retiring president, Dr. Donald C. Balfour, will be a feature of this meeting. On Friday evening, at the annual convocation of the College, Dr. Eugene H. Pool, president-elect, will deliver his inaugural address and the 1936 class of initiates will be received into fellowship.

At other evening scientific meetings and at various conferences during the week, eminent surgeons of the United States and Canada, with a number of distinguished visitors from foreign countries, will present and discuss papers on surgical subjects of timely importance.

Standards Set for Canned Dog Foods. — Effective June 3, 1936, all dog and cat foods packed in California must comply with state standards regarding quality of ingredients and labeling, according to an order issued by Dr. Walter M. Dickie, Director of the California State Department of Public Health. After this date, all such canned products that do not conform to the California Pure Foods Act will be seized wherever they may be found in the state.

It has been discovered that during the depression some underprivileged individuals began the practice of eating canned dog and cat foods because of the belief that their meat content was high. Recent investigations have revealed the fact that putrid inedible and diseased products are sometimes used in the manufacture of commercially packed dog and cat foods. In order to stop this practice, the state health authorities will hereafter regard as adulterated, within the meaning of the California Pure Foods Act, any canned dog and cat foods that consist in whole or in part of filthy, decomposed or putrid animal or vegetable substances, of any portion of an animal or vegetable unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter.

Such canned food must be packed in hermetically sealed containers and the contents must be wholesome and nutritious for dogs, cats or any domesticated animal. It may be composed of edible fresh, frozen or cured meat, meat by-products, or fish either wholly or in part. It may also contain cereals and other edible food products in permissible proportions provided that the presence of any or all of such are indicated on the label.

All such canned dog and cat foods that comply with the regulations must bear the following notations on the label: "Production Supervised by State of California Department of Public Health, Bureau of Cannery Inspection." Furthermore, the terms "fit for human food" or "fit for human consumption" are prohibited on the labels of canned dog or cat foods.

1936 Graduate Fortnight: New York Academy of Medicine.—For the annual graduate fortnight of the New York Academy of Medicine a subject of outstanding importance in the practice of medicine and surgery is selected and is presented from as many angles as possible. An attempt is made to offer to the profession a grasp of the advances in medicine so that the busy practitioner may be informed as to the last word on a given topic.

The ninth annual graduate fortnight will be held October 19 to 31, and will be devoted to a consideration of trauma; occupational diseases and hazards.

Twenty-three important hospitals of the city will present coördinated afternoon clinics and clinical demonstrations. At the evening meetings prominent clinicians from various parts of the country who are recognized authorities in their special lines of work will discuss various aspects of the general subject.

A comprehensive exhibit of books, pathologic and research material, apparatus for resuscitation and other first-aid appliances will be assembled. Demonstrations will be held at regular intervals.

Some of the features to be presented at the meetings, in the clinics, and in the exhibit, will be: First aid in industry, in the home, and on the highway; accidents and their management; resuscitation; shock and hemorrhage; hazards of athletics; general principles of fracture treatment; fractures of the extremities; injuries of the head, spine, abdomen, chest, and genito-urinary systems; hand injuries; burns—thermal, electrical, radiant, and chemical; medico-legal aspects of trauma and disability; war injuries and emergencies, including injuries caused by the high explosives, medical aspects of chemical warfare, gas attack, gas defense; carbon monoxid poisoning; fatigue and noise in industry; harmful conditions in industry; occupational diseases; occupational hazards; industrial poisonings; relation of trauma to disease.

The medical profession is invited to attend. A complete program and registration blank may be secured by addressing Dr. Frederick P. Reynolds, the New York Academy of Medicine, 2 East 103rd Street, New York City.

The Spirit of Science.—In 1870 Gaston Paris, eminent French philologist, wrote a letter to a German scholar from which the following quotation is taken. This letter was written during the Franco-Prussian War at a time when the city of Paris was under seige. Nevertheless, the Frenchman remained steadfast in his devotion to ideals as expressed in this communication to a citizen of an enemy nation. The late Dr. Herman M. Adler, at a conference of heads of state institutions in California, referred to the high ideals expressed in this communication.

"I profess absolutely and without reservation this doctrine: that science has no other object than the truth, and the truth for its own sake, without any care as to the consequences, good or bad, regrettable or fortunate, which that truth may have in practice. He who through a patriotic motive, religious, and even moral, allows himself, in the facts that he is studying, in the conclusions that he draws, the least concealment, the slightest alteration, is not worthy of holding his place in the great laboratory where probity is a claim for admission more indispensable than skill. Thus understood, the studies that we share, carried on with the same spirit in all civilized countries, form, above nationalities which are restricted, diverse, and too often hostile, a great fatherland which no war soils, which no conqueror threatens, and in which men's souls find the refuge and the unity that the City of God has given them in other times."

Tuberculosis Death Rate Lowered.—There were 4,516 deaths from tuberculosis registered in California last year as compared with 4,611 such deaths registered in 1934. The rate dropped from 74.9 per hundred thousand in 1934 to 72 per hundred thousand in 1935.

Of the 4,516 individuals who died of tuberculosis in California last year, 3,179 had lived within the state for ten years or more, 576 had lived in California from five to nine years, 357 had lived here from one to four years, and 186 tuberculosis decedents had lived in California for less than one year. By months the length of residence within the state of tuberculosis decedents last year was as follows: Under one month, 22; one to three months, 44; four to six months, 43; seven to twelve months, 77.

Of these deaths 4,105 were due to tuberculosis of the lungs, 131 to tuberculosis of the meninges, 103 disseminated tuberculosis, and the remainder were caused by tuberculosis of other organs of the body.

A true tuberculosis death rate for each community of the state is not available for the reason that many county institutions where tuberculosis deaths occur in great numbers may be located within cities, thus providing an abnormally high tuberculosis death rate for the city. If the county hospital is in the rural district an abnormally high tuberculosis death rate is provided for the county as a whole.

It is noticeable that tuberculosis death rates are higher in those counties where state hospitals and other hospitals are located. In those counties where there are many private institutions for the specific treatment of the tuberculous the death rates are inordinately high. In those cities that are known to be centers for casual laborers the death rate is exceptionally high. The same is true also of some of the southern counties where there are large numbers of Mexicans and other foreign-born who possess little or no immunity against the disease.

In consideration of the fact that untold numbers of tuberculous individuals migrate to California each year in the hope of finding benefits in a favorable climate, the low tuberculosis death rate for the state constitutes an enviable record. To be sure, it is much higher than that for most of the other states. That it should be maintained at so low a level in spite of the unprecedented migration to California is a matter of congratulation. Credit also should be given to those counties which maintain adequate machinery for the prevention of the disease and for the removal and isolation of active cases.

$5,358,760 in Social Security Checks Sent to Four States.—United States Treasury checks totaling $5,358,759.96 were issued to California, Wisconsin, Washington, and Iowa to cover the public-assistance grants to those states for the current quarter, April 1 to June 30, the Social Security Board announced recently.

California receives its first allotment of federal funds—$2,700,140.63—following approval of the state's old-age assistance plan by the Social Security Board on May 6.

Wisconsin receives a total of $1,272,790.83, which includes $945,000 for aid to the aged, $69,457.50 for aid to the blind, and $258,333.33 for aid to dependent children. Washington receives $700,703.50, consisting of $486,202.50 for aid to the aged, $39,501 for aid to the blind, and $175,000 for aid to dependent children. Iowa receives $685,125 for aid to the aged.

Thirty-four states and the District of Columbia have thus far taken advantage of the public-assistance provisions of the Social Security Act and are receiving federal aid in providing for their needy aged persons, blind persons, and dependent children. Federal contributions to these states for the three months ending June 30 are expected to total $18,500,000.

In order to qualify for federal funds, states must set up public-assistance plans which meet certain requirements specified in the Social Security Act and must submit their plans to the Social Security Board for approval. When a state plan for aid to the needy aged or the blind is approved, the Federal Government will pay half of any amount, up to a combined federal-state total of $30 a month to an individual, which the state grants to needy persons sixty-five years of age and over and to the needy blind, provided these aged or blind are not inmates of public institutions. The Federal Government also adds five per cent to its half in making its contribution. The states may use this additional amount for administering their plans, for cash payments to needy individuals, or for both.

Under approved plans for aid to dependent children, the Federal Government will match $1 for every $2 disbursed by the state for this form of assistance, up to a combined federal-state total of $18 per month for the first dependent child in a family, and $12 per month for each additional dependent child in the same family. Federal grants also include one-third of the state's administrative costs for this form of assistance.

LETTERS

Concerning article in "Time" in which American Medical Association and California Medical Association activities were mentioned.*

The Journal of the
American Medical Association
535 North Dearborn Street
Chicago

June 8, 1936.

Dear Doctor Kress:

Rock Sleyster has written to me relative to certain doubts which seem to exist in your vicinity relative to my relationships to *Time* magazine.

Just as soon as I read your editorial on *Time* magazine in last month's issue, I wrote a letter to Henry Luce. He apparently turned the letter over to Myron Weiss, who is in charge of science editing. I enclose herewith copy of my letter to Mr. Luce. . . . This should let you know where I stand in relationship to *Time* magazine.

Sincerely yours,
Morris Fishbein.

The Journal of the
American Medical Association
535 North Dearborn Street
Chicago

Mr. Henry R. Luce, May 19, 1936.
New York City.

Dear Mr. Luce:

During the last two months physicians everywhere have begun to comment on innumerable inaccuracies in the section of *Time* devoted to medicine. Moreover, the point of view relative to the American Medical Association and relative to the attitude of the majority of physicians of this country toward socialization and regimentation of medicine has occasioned some doubt as to where *Time* stands on this matter.

I feel that the question is of sufficient importance to bring to your attention the enclosed statement from California and Western Medicine, which is the official publication of the California Medical Association. Incidentally, I can affirm everything that California and Western Medicine says relative to the inaccuracies of the item which was published in *Time*.

Sincerely yours,
(Signed) Morris Fishbein.

* * *

American Medical Association

Chicago, June 10, 1936.

Dear Doctor Kress:

I am greatly obliged to you for your letter of June 1, to which is attached a leaflet on Group Medical and Hospital Service, reprinted from the *Los Angeles County Farm Bureau Monthly*. I shall send this on to our Bureau of Medical Economics.

I have just been informed that at the recent meeting of the California Medical Association a statement was rather freely made to the effect that the American Medical Association had something to do in some mysterious way with the publication of certain items which recently appeared in the magazine *Time*. Any such rumor is, of course, without any basis in fact. Unfortunately, some of our friends seem to be so constituted that they do not require facts to serve as a basis for rumors which they help to circulate.

I shall be delighted to see the account of the Coronado meeting in California and Western Medicine. I hope you had a splendid session.

With my sincere good wishes, I am

Very truly yours,
Olin West.

Concerning dinitrophenol and its dangers.

To the Editor:—I am referring to you a letter from the Cutter Laboratories stating their position in discontinuing the sale of dinitrophenol. In a conversation with their representative at the Arizona State Medical Association meeting at Nogales in April, 1936, I suggested that such ethical commercial laboratories as their own should discontinue the sale of this drug, on account of the unprecedented occurrence of cataracts in patients using dinitrophenol as a reducing medicine.

I was, therefore, pleased to learn from Dr. R. K. Cutter at the California State Medical Association meeting at Coronado in May that they had discontinued the sale of the drug.

You may have this correspondence for whatever publication you may desire to give to it in the interest of informing physicians of the dangers of the use of dinitrophenol.

Very truly yours,
Harold F. Whalman, M.D.

* * *

Dear Doctor Whalman:

Answering your letter of the 1st requesting our position in discontinuing the sale of dinitrophenol, I believe that this can best be done by quoting the letter which we send out when we refuse to fill orders.

> We appreciate your recent order for dinitrophenol, but regret that we are unable to fill it, as we have discontinued the sale of this drug.
>
> It was with considerable hesitation that we announced through the profession the availability of Dinitrophenol (Cutter). We did not do so because we thought the product had been proven, but rather because we knew that

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* Note: Editorial comment was made in the May issue of California and Western Medicine (page 355) concerning certain mistatements in the lay magazine, *Time*, in which the American and California Medical Associations were mentioned. The article in *Time* led to considerable conjecture as to the possible source of the statements made. Here and there names of different persons were mentioned in connection therewith. It is therefore of interest to note that officers of the American Medical Association had the same point of view as our own as expressed in the editorial criticisms written for the May California and Western Medicine. A letter from Dr. Morris Fishbein, editor of the *Journal of the American Medical Association* and one from Dr. Olin West, secretary of the American Medical Association. are here given.

untested and improperly standardized dinitrophenol was not only being offered to the profession but was being advertised over the radio to the laity. We felt that the marketing of a properly tested and standardized dinitrophenol along strictly ethical lines and with the proper warning was a needed service.

Time has shown, however, that there may be delayed toxic effects from dinitrophenol which are unpredictable, and which seem to have little or no bearing on the purity of the drug or the method of administration. For this reason we believe that at present it should have no place in the field of medicine, outside of pure research, and have in consequence withdrawn Dinitrophenol (Cutter) from the market.

Yours very truly,
CUTTER LABORATORIES.

I also include a carton, and you will note that on the face of it it says, "This is a dangerous drug and should be taken only under the direct supervision of a physician." I feel sure that this discouraged a great many patients from self-treatment.

Very truly yours,
Cutter Laboratories.
R. K. Cutter, M.D.

SPECIAL ARTICLES

A. B. 246—NONPROFIT HOSPITAL SERVICE BILL*

CHAPTER 386

An act for the regulation and control of corporations organized for the purpose of operating nonprofit hospital service plans.

[Approved by the Governor July 5, A. D. 1935.]

The people of the State of California do enact as follows:

Section 1. This act shall govern any nonprofit corporation heretofore or hereafter organized under the laws of the State of California which by its original or by any amended articles is authorized to establish, maintain and operate a nonprofit hospital service plan whereby hospital care may be provided by said corporation to such of the public who become subscribers to said plan under a contract which entitles each subscriber to certain hospital care as provided in said contract, or whereby said hospital care may be provided by any hospital or hospitals with which said nonprofit corporation has or shall have a contract to furnish such hospital care to said subscribers provided that no such corporation operating under the provision of this act shall enter into any such contract with any hospital wholly or partly supported by taxation, except where such a hospital is the only hospital in the county where it is located, or is a hospital maintained and operated by or in connection with a State college or university of the State of California in conjunction with and as a part of its educational and administrative program; and provided further that no corporation authorized by the provisions of this act to establish, maintain and operate a nonprofit hospital service plan may itself furnish hospital care to its subscribers or do any of the acts herein authorized, unless and until it shall have first procured a certificate from the State Department of Puhlic Health certifying that it is complying with the standards required by said State Department of Public Health, nor shall any such corporation enter into any contract with any hospital for the furnishing of hospital care to its subscribers unless the hospital with which it contracts has procured such a certificate from the State Department of Public Health.

Sec. 1a. "Hospital care" as used in this act may include any or all of the following services: maintenance and care in hospital, nursing care, drugs, medicines, physiotherapy, transportation, material appliances and their upkeep.

Sec. 2. This act shall not apply to nor govern any corporation operating a hospital service plan on a profit basis, or which, though operating such a plan on a nonprofit basis, shall be organized for or shall conduct any business whatsoever on a profit basis, nor shall it apply to or govern any corporation formed and existing under the Constitution of 1849 pursuant to the act entitled "An act concerning corporations," passed April 22, 1850.

Sec. 3. Any nonprofit corporation organized to operate a nonprofit hospital service plan in the manner and in accordance with the provisions of this act shall be exempt from all other provisions of the insurance laws of this State, unless otherwise specifically designated herein, not only in governmental relations with the State but for every other purpose, and no law hereafter enacted shall apply to such a corporation unless it be expressly designated therein.

Sec. 4. At least two-thirds of the directors of such a corporation which shall furnish hospital care through contracts with hospitals as provided in Section 1 hereof shall be composed equally of duly appointed representatives of such hospitals and duly qualified and licensed practicing physicians holding a valid and unrevoked certificate to practice medicine and surgery or a physician and surgeon certificate, issued under the provisions of the State Medical Practice Act in the State of California. Such a corporation which shall itself furnish such hospital care shall choose its board of directors from such persons as it shall see fit.

Sec. 5. No corporation shall establish, maintain or operate a nonprofit hospital service plan as authorized by the provisions of this act unless it shall have first procured the written consent of the Commissioner of Insurance of this State to such establishment, maintenance and operation.

Sec. 6. The rates charged by such corporation to the subscribers for hospital care shall at all times be subject to the approval of the Commissioner of Insurance of the State of California, and all rates of payments to hospitals made by such corporation pursuant to the contracts provided for in Section 1 of this act shall be approved prior to payment by said Commissioner of Insurance.

Sec. 7. Every such corporation shall annually on or before the first day of March file in the office of the Commissioner of Insurance of this State a statement verified by at least two of the principal officers of said corporation showing its condition on the thirty-first day of December then next preceding, which shall be in such form and shall contain such matters as the Commissioner of Insurance shall prescribe.

Sec. 8. The Commissioner of Insurance, or any deputy or examiner or any other person whom he shall appoint, shall have the power of visitation and examination into the affairs of any such corporation and free access to all the books, papers, and documents that relate to the business of the corporation, and may summon and qualify witnesses under oath and may examine the officers, agents or employees of such corporation or any other persons in relation to the affairs, transactions, and condition of said corporation.

Sec. 9. All acquisition costs in connection with the solicitation of subscribers to such hospital service plan shall at all times be subject to the approval of the Commissioner of Insurance.

Sec. 10. The funds of any corporation subject to the provisions of this act shall be invested only in securities permitted by the law of this State for the investment of assets of life insurance companies and such securities shall be valued according to the methods used in valuing similar securities held by life insurance companies.

Sec. 11. Any dissolution or liquidation of a corporation subject to the provisions of this act shall be conducted under the supervision of the Commissioner of Insurance, who shall have all powers with respect thereto granted to him under the provisions of law with respect to the dissolution and liquidation of insurance companies.

VETERANS' HOSPITALS: THEIR PROPER AND IMPROPER USE

Lines were drawn today between disabled and unwounded veterans when M. A. Harlan, national commander of the Disabled Veterans of the World War, issued a brisk reply to the published statement of James E. Van Zandt calling for a general pension system.

Harlan, on behalf of his organization, expressed "unqualified and unreserved opposition" to the proposed pension law.

"We will neither sponsor nor support it," he said.

Asked if his opposition was not only the obvious position of an organization whose members now are benefiting from government compensation, Harland declared there was a difference between a pension—which he described as a "gratuity from the Government without regard to disability received, if any"—and a disability compensation for actual physical injuries received in the line of duty.

"Our position is not a selfish one," he said. "We have the interest of the entire taxpaying element of the country at heart, as well as our own. We believe the first obligation of the Government is toward its wounded veterans, and that the forthcoming economy drives in Congress will deprive worthy disabled veterans of their just consideration if there is also a movement on to pay a pension to all veterans.

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* The nonprofit hospital service law, passed by the California Legislature in 1935 and approved by Governor Frank Merriam on July 5 was printed on page 175 of the August, 1935, issue of California and Western Medicine. Owing to the present interest in hospitalization insurance plans by many members of the Association, A. B. 246 (Chapter 386) is here reprinted. See also editorial comments in this issue (page 2).

"There were about 500,000 men wounded or disabled during the war, and of these only about 345,000 now are receiving compensation. And the total score of war's ravages has not yet been told. Medical authorities estimate that the peak of mental disabilities directly traceable to the war will not be reached until 1948."

HOW VETERANS' HOSPITALS ARE MISUSED

Harlan said that many industrial concerns have for several years been evading the responsibility for occupational injuries to their workmen by hospitalizing them in government institutions, regardless of whether or not disabilities were due to World War service.

"We would like to make the public conscious of the difference between a man disabled in the course of a dangerous industrial occupation, and a man disabled in the service of his country," the veteran leader added.

Of the $800,000,000 a year that is spent for pensions and compensations, less than one-third goes to World War veterans, Harlan said, more than one-third to Spanish War veterans, and most of the rest to veterans of the Civil War.—*Los Angeles Herald Express,* June 18, 1936.

TWENTY-FIVE YEARS OF LIFE SAVING

A comparison of deaths in California in 1911 with deaths in 1935 reveals the tremendous savings that have been effected in human lives during the past twenty-five years.

INFANTS

In 1911, 10.4 per cent of all deaths in the state were those of infants, but in 1935 the percentage of infant deaths was 5.5.

CHILDREN

In 1911, 6.9 per cent of all deaths were in children between the ages of one and fourteen years, while in 1935 the percentage of deaths in this age group was 3.3.

YOUNG ADULTS

In 1911, among individuals from fifteen to forty-four years of age the percentage of deaths to the total was 28.2, while in 1935 the percentage of deaths in this age group was 16.9.

THE PRODUCTIVE AGE

In 1911 the percentage of deaths among those fifteen to thirty-four years of age was 16.6 per cent, while the percentage among individuals of this age group in 1935 was but 8.9 per cent. Since tuberculosis in 1911 exacted heavy tolls among individuals in this age group, the remarkable reduction in tuberculosis mortality is to a large extent responsible for the savings here recounted.

ADULTS

The percentage of deaths among those over forty-five years of age increased in 1935 as compared with 1911, the percentages being 13 and 11.9, respectively. Among those fifty-five to sixty-five years of age the percentage increased from 13.1 in 1911 to 17.3 in 1935, and among those over sixty-five the percentage increased from 29.5 in 1911 to 44 in 1935.

It will be noted that the greatest life saving has occurred in the younger age groups among those under forty-five years of age. The effect has been to postpone the age of death, resulting in higher percentages of deaths among older people. The application of the principles of preventive medicine is largely responsible for this remarkable record. It is estimated that the population of California in 1911 was almost two and one-half million, and in 1935 it is estimated that the population was six and one-quarter million. In 1911, fourteen out of every one thousand persons died. In 1935, 11.5 individuals out of every one thousand population died. Had the 1911 death rate prevailed last year, there would have been 15,686 more deaths than actually occurred.

In commenting on longer and safer lives in the United States the *Illinois Health Messenger* recently stated that life is safer and longer in America than in any except the Scandinavian countries of Europe. People live from one to two years longer on the average in the United States than in England, France, Germany, or Italy. This is not due alone to a favorable natural environment, but to no small degree from the cultivation and utilization of preventive medicine.

The following table gives the total numbers of deaths in California by age groups and percentages of the total for the years 1911 and 1935:

Total Deaths by Age Groups

	1911		*1935*	
	Number	*Per Cent*	*Number*	*Per Cent*
Under 1	3,528	10.4	3,973	5.5
1–4	1,405	4.1	1,132	1.6
5–14	942	2.8	1,253	1.7
15–24	2,215	6.5	2,531	3.5
25–34	3,432	10.1	3,920	5.4
35–44	3,937	11.6	5,786	8.0
45–54	4,039	11.9	9,391	13.0
55–65	4,447	13.1	12,583	17.3
65+	10,067	29.5	31,931	44.0
	34,012	100.0	72,500	100.0

MUSSEL QUARANTINE ORDER ISSUED

The following quarantine order has been issued by Dr. Walter M. Dickie, Director of the California State Department of Public Health:

"A quarantine of all mussels from the ocean shore of California from the southern boundary of Ventura County north to the California-Oregon boundary, with the exception of the bay of San Francisco, is hereby established. All health officers and food inspectors are hereby instructed to enforce the provisions of this quarantine and to prohibit the taking, sale, or offering for sale, of mussels gathered in the district specified. This quarantine order shall be effective for the period May 19, 1936, to September 30, 1936.

"Said action is taken for the preservation of the public health."

This quarantine has been established annually for a number of years. It was issued earlier than usual this year because of two fatal cases of mussel poisoning of residents of Los Angeles who gathered mussels and ate them in Ventura County. Never before have poisonous mussels been discovered so far south in California. Heretofore the quarantine area has extended from Monterey County to the Oregon state line. Since the above quarantine order was issued it has become necessary, however, to include the coastal area of Los Angeles County and investigations are being made as far south as the Mexican border in order to determine if poisonous shellfish may be recovered in southern waters of California.

It will be noted that this quarantine will be effective until the end of September. Ordinarily the peak of toxicity in these shellfish comes about the middle of July. Early in the season the toxicity is comparatively low and after July it diminishes gradually, until by the end of September little or none is discoverable. It is important, however, that the provisions of this quarantine order be observed most carefully during the entire period. Some individuals are more susceptible to this type of poisoning than others, and small quantities of shellfish might produce marked symptoms of severe illness.

MORTALITY FROM CERTAIN DISEASES AMONG CHILDREN UNDER FIFTEEN YEARS OF AGE IN CALIFORNIA

1906–1934

By Walter M. Dickie, M.D.
San Francisco

PART III*

Among children under one year there are 456 deaths during the four-year period 1906-1909, with a rate of 309.7 per 100,000 group population. There has been a steady decrease in rates throughout remaining periods until 1930-

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* Part I of this article was printed in the May issue of California and Western Medicine, page 454; Part II, in the June issue, page 542.

1934, when there are 324 deaths with a corresponding rate of 81.0 per 100,000 group population. This is a reduction in the mortality rate of 73.8 per cent. In the ages between one and four there are 640 deaths, with a corresponding rate of 113.3 per 100,000 group population in 1906-1909. This rises to 1,001 deaths, rate 118.5 during the next five-year period and then drops gradually to a low point in the mortality rate, 52.5 per 100,000 group population with 906 deaths. This represents a decrease in the mortality rate of 55.7 per cent under the high point of 1910-1914.

Mortality from Tuberculosis, 1906-1934

Years	Under 1 yr.		1-4 years		5-15 years	
	Number	Rate	Number	Rate	Number	Rate
1906-1909	456	309.7	640	113.3	580	43.9
1910-1914	641	295.2	1,001	118.5	893	42.9
1915-1919	442	175.3	988	96.8	1,063	43.3
1920-1924	480	161.7	927	74.8	1,095	35.0
1925-1929	426	121.2	1,090	72.6	1,143	28.7
1930-1934	324	81.0	906	52.5	1,003	21.8

Among those in age groups 5 to 14 the rate in 1906-1909 is 43.9 per 100,000 group population, with 580 deaths. Although the number of deaths is doubled during some of the next periods the rate never rises so high as in 1906-1909, and falls to a low point of 21.8 in 1930-1934, with 1,003 deaths during that period. The decrease in rate from 43.9 in 1906-1909 to 21.8 in 1930-1934 is 50.3 per cent, the lowest of any of the three age periods studied.

VENEREAL DISEASES

In children under one year of age, the venereal diseases play quite a conspicuous part. During 1906-1909 there are 176 deaths attributable to these causes, with a corresponding rate of 119.5 per 100,000 estimated group population. During the next five-year period (1910-1914) the number of such deaths rises to 378, and the rate is 174.1. This rate drops considerably during the remaining periods until in 1930-1934 we find 265 deaths and a rate of 66.3 per 100,000 group population.

In the group of children one to four years of age, the number of deaths from venereal disease is diminished sharply and the rate is almost negligible. It begins at 3.7 per 100,000 population with 21 deaths, then rises to 6.2 per 100,000 population with 52 deaths and from there decreases to 1.7 per 100,000 group population with 29 deaths during 1930-1934.

In age group 5 to 14 years, the trend is similar to that in age group 1 to 4 years, although the rates are very small. It is probable that many of those with congenital infection have died during the earlier age groups, and only a few hold over and die during this period.

Mortality from Venereal DIseases

Years	Under 1 yr.		1-4 years		5-14 years	
	Number	Rate	Number	Rate	Number	Rate
1906-1909	176	119.5	21	3.7	3	0.2
1910-1914	378	174.1	52	6.2	17	0.9
1915-1919	323	128.1	55	5.4	19	0.8
1920-1924	405	136.4	46	3.9	29	0.9
1925-1929	331	94.2	51	3.4	31	0.8
1930-1934	265	66.3	29	1.7	25	0.5

OTHER EPIDEMIC DISEASES

This group consists of the residue not included in the main groups of deaths treated separately. The diseases under this heading which produce the greatest number of deaths are erysipelas, tetanus, purulent infection or septicemia and the mycoses, which account for nearly the total number of deaths.

By far the highest death rate in this group of diseases occurs among children under one year of age, although there is not such a great discrepancy in so far as the actual number of deaths is concerned. During the period 1906-1909 there are seventy-one deaths of children under one year, or 48.2 per 100,000 group population. This rises to 236 such deaths with a rate of 79.5 per 100,000 group population during 1920-1924, and then falls to 127 and a corresponding rate of 31.8 per 100,000 group population in 1930-1934.

In children one to four years of age, the trend is similar to that among infants less than one year old, but the rates are much lower. Beginning with a rate of 6.2 per 100,000 group population and 35 deaths, it rises to a high of 123 deaths and a rate of 9.9 per 100,000 group population during 1920-1924 and then falls to a low of 77 deaths, with a corresponding rate of 4.5 per 100,000 group population during 1930-1934.

Among children 5 to 14 years of age, the rates are somewhat lower than among the two lower age groups, but in general the trend is similar. We find that there are thirty deaths during 1906-1909, with a rate of 2.3 per 100,000 group population, which rises to 200 deaths and a mortality rate of 6.4 per 100,000 group population in 1920-1924, and then falls to 169 deaths and a corresponding rate of 3.7 per 100,000 group population.

Mortality from Other Epidemic Diseases, Chiefly Erysipelas, Tetanus, Purulent Infection (Septicemia and the Mycoses), 1906-1934

Years	Under 1 yr.		1-4 years		5-14 years	
	Number	Rate	Number	Rate	Number	Rate
1906-1909	71	48.2	35	6.2	30	2.3
1910-1914	126	58.0	69	8.2	25	1.3
1915-1919	131	52.0	67	6.6	60	2.4
1920-1924	236	79.5	123	9.9	200	6.4
1925-1929	201	57.2	124	8.3	186	4.7
1930-1934	127	31.8	77	4.5	169	3.7

EXTERNAL CAUSES

This group of deaths follows closely those of the communicable diseases, and for that reason the study includes them as well as the infectious disease group. In all three age groups studied, the numbers of deaths are lowest during 1906-1909, but increase each period up to 1925-1929, and then fall slightly during 1930-1934. Rates increase in the two older age periods studied up to 1920-1925, and then decrease for the next two periods, the rates being slightly lower than in 1906-1909 in all instances.

In the group of children who died uder one year of age from external causes, there are 178 or 120.9 per 100,000 group population during 1906-1909. Both the number and the rate from deaths in this cause group increase until 1925-1929, when a high point is reached with 490 deaths and a rate of 139.4 per 100,000 group population. During 1930-1934 both number and death rate recedes to 422 and 105.5 per 100,000 group population, respectively.

Mortality from External Causes, 1906-1934

Years	Under 1 yr.		1-4 years		5-14 years	
	Number	Rate	Number	Rate	Number	Rate
1906-1909	178	120.9	459	81.3	585	44.3
1910-1914	270	124.4	761	90.1	853	43.4
1915-1919	307	121.8	929	91.0	1,106	45.1
1920-1924	406	136.7	1,150	92.8	1,510	48.3
1925-1929	490	139.4	1,285	85.6	1,787	44.9
1930-1934	422	105.5	1,089	63.2	1,643	35.2

Age groups one to four years shows 459 deaths and a rate of 81.3 per 100,000 group population 1906-1909, and then rises to a high point in numbers during 1925-1929 with 1,285 external deaths, but the high point in the death rate from external causes is reached during 1920-1924 with the rate of 92.8 per 100,000 group population. The lowest rate comes during 1930-1934, when there are 1,089 deaths with a rate of 63.2.

Age group 5 to 14 shows the largest number of deaths of any of the three age groups under study, but the rates are lower than in the other two groups because of the greater number of children exposed to the risk. Beginning with 585 deaths and a rate of 44.3 per 100,000 group population, the greatest number of deaths is found during 1925-1929, when there are 1,787 such deaths. The high point in rate comes in 1920-1924 with 48.3, but drops to 35.2 per 100,000 group population with 1,643 deaths during 1930-1934.

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. IX, No. 7, July, 1911

From Some Editorial Notes:

The American Medical Association Meeting.—As the annual meeting of the American Medical Association convenes [in Los Angeles] the day this number of the *Journal* goes to press, it is not possible to publish any matter relative to the meeting in this issue. At the time of writing, however, there is every prospect that the meeting will be largely attended, and that the California members will be there in considerable numbers. . . .

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Salvarsan: New Indications.—With the increasing use of salvarsan, we now find scattered through the literature many reports of cases where various sorts of disturbances and even deaths have followed its injection. These reports might lead to an exaggerated fear of this, our most effective antisyphilitic drug, were they not subjected to most careful analysis and study. . . .

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The California Association of Medical Milk Commissions.—For two years there has been held in connection with the meeting of the State Society, and at the invitation and expense of the San Francisco commission, a meeting devoted to the consideration of a pure milk supply. . . . Accordingly, there was formed at Santa Barbara the California Association of Medical Milk Commissions. The association is composed of the milk commissions of the county medical societies, and its purpose is to promote the use of certified milk and to assist in raising the general milk supply to a higher standard by dispensing literature on this subject, by illustrated lectures, by public meetings, and by personal work among the profession, the laity, and the dairymen. . . .

From an article on "The Experimental Basis of Vaccine Therapy" by Frederick P. Gay, M. D., University of California, Berkeley.

It would be rash indeed to attempt to outline the potential value of vaccine therapy, but one may sketch very clearly the historical path that has led to our present method of treating bacterial infections by injecting killed cultures of bacteria. When we later come to consider the rationale of this latest aspect of immunization, that is immunization employed as a therapeutic measure, we shall find ourselves stopping short of ultimate explanation, embarrassed not at any failure of the laboratory worker to respond to clinical demand, but by the fact that practice has outstripped theory, and not, it is to be feared, to the ultimate benefit of practice itself. . . .

From an article on "The Indications, Technique, and Results in Decompressive Operations on the Brain," by Wallace I. Terry, M. D., San Francisco.

The idea of trephining the skull for the relief of increased intracranial pressure is an old one—indeed, it is possible that the crude openings in the skulls of some prehistoric individuals were made for the purpose of relieving persistent headache due to tumor. The credit of advocating decompressive trephining for tumors of the brain which were not removable or could not be located is due to Horsley, although others had previously reported cases where such operations had been done. It was not, however, until Harvey Cushing, basing his ideas largely upon his experimental work on cerebral compression, empha-

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† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in Front Advertising Section, Page 17)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By Charles B. Pinkham, M.D.
Secretary-Treasurer

News

"Three swift raids on suspected Los Angeles, Hollywood, and Long Beach headquarters of a coast-wide illegal operation ring, extending from Seattle to San Diego, form the latest developments today in local investigation of the Syndicate's activities. More than a truckload of instruments and equipment valued at $150,000 were confiscated at the apparently hurriedly vacated offices. . . . All offices were under the name of 'Dr. George E. Watts,' police declared. Rolls of currency were found in the Los Angeles office, indicating it had been hurriedly vacated. Evidence of the nature of the business was found in the presence of more than fifty pieces of jewelry, apparently paid by women patients in lieu of cash. . . ." (Los Angeles *Evening News*, June 6, 1936.)

"The Federal Government yesterday stepped into the investigation of the alleged state-wide criminal operation syndicate, uncovered here last week. A representative of the Intelligence Unit of the Bureau of Internal Revenue called on Captain of Inspectors Charles Dullea, seeking all information police have gathered on the ring. . . . Three persons have been arrested here already, with warrants out for two others. Those under arrest are R. L. Rankin, alleged 'brain' of the syndicate; Sarah Lee, secretary to Dr. J. C. Ross; and J. C. Perry, Rankin's brother-in-law and local manager. Warrants are out for Doctor Ross and Dr. James Beggs, alleged to have been the Oakland surgeon for the ring. . . ." (San Francisco *Examiner*, June 7, 1936.)

"Correspondence, surgical instruments, and papers of Dr. Lawrence J. Giubbini (licensed chiropractor) wanted in connection with an alleged illegal operation ring, were seized here today by San Francisco and local police. . . . An Internal Revenue agent went with the officers seeking information in connection with income tax reports of Doctor Giubbine and his partner. . . ." (Associated Press dispatch, dated San Jose, and printed in the San Francisco *Call-Bulletin*, June 18, 1936.)

"Blanket felony indictments of thirty-one men and women, said to be members of a coast-wide illegal operation ring, were returned yesterday by the grand jury in Superior Judge Elmer E. Robinson's court. . . . Bail for R. L. Rankin, asserted ringleader of the group, and three other alleged principals—G. E. Watts, J. A. Creeth, and J. O. Shinn—were set at $5,000. Bail of Marvin Raithel, under arrest, and a witness at the grand jury hearing on June 10, was fixed at $500. The women's bail was set at $500, and the other doctors involved had bail fixed at $2,500. Besides Raithel and the four alleged leaders, the following were indicted: Valentine St. John, M. D., W. Norman Powers, M. D., Harry L. Houston, M. D., E. T. Pattee, M. D., James Beggs, M. D., J. C. Ross, M. D., L. J. Giubbini, D. C., G. B. Smith, M. D., Paul Robert de Gaston, William Byrne, Violet I. Rankin, J. C. Perry, Violet Pellegrini, Leola Habel, Ruth Hanson, Viola Warner, Laura Miner, Nedra Arden, Josephine Follet, Grace Cole, Bessie McCarthy, Lillian Wilson, Zora McEwen, Beatrice Bole, Mary Wilson, and Gladys Korf. . . ." (San Francisco *Examiner*, June 19, 1936.)

"Police carted two truckloads of evidence, assertedly bearing on operations of a supposed state-wide physicians'

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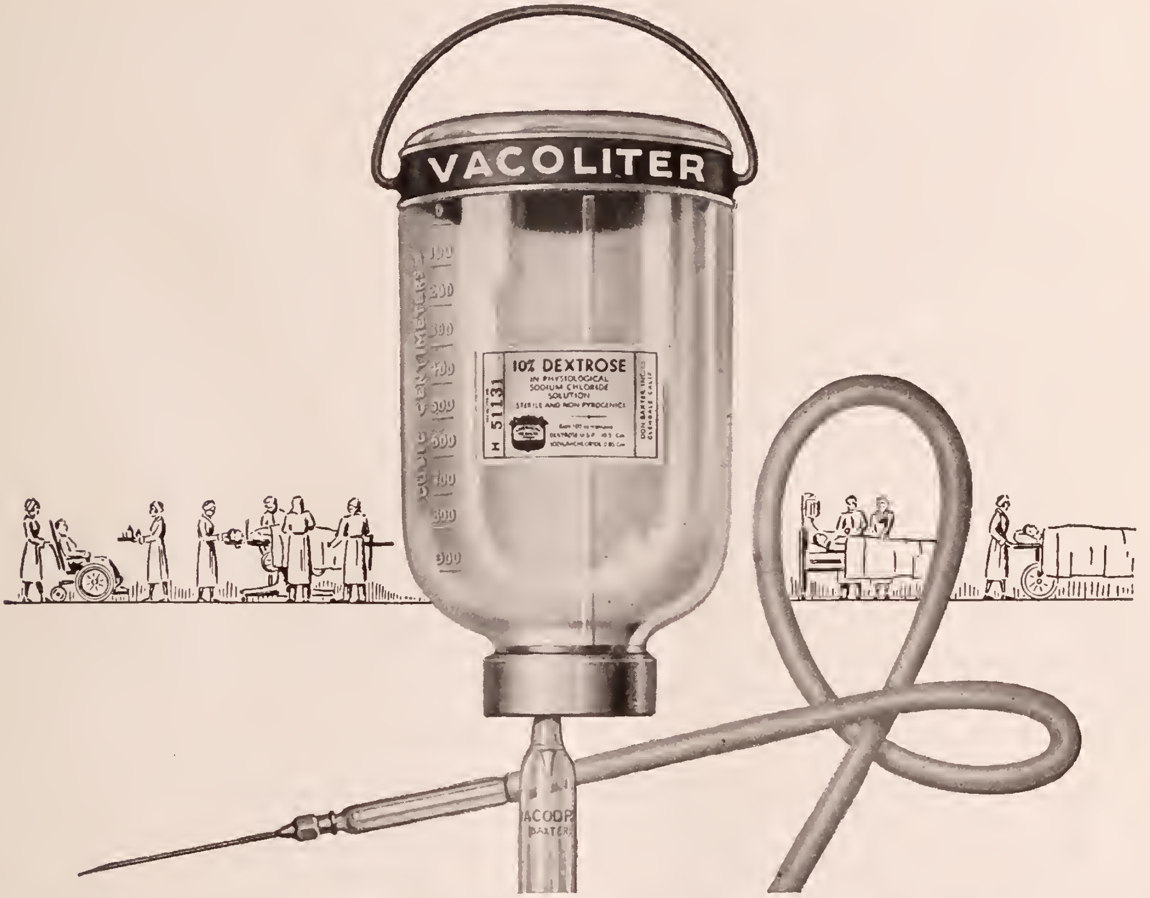
† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in Front Advertising Section, Page 18)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Few Physicians in United States Congress.—The interest of the average physician in the conduct of the political situation of the country reminds one of Mark Twain's remark about the weather. He said, "Everyone is criticizing it, but no one does anything about it." Medical men criticize conduct of local, state or national affairs, but if the present medical representation in Congress can be used as a criterion, the profession has almost entirely lost interest in politics.

Time was when doctors of medicine were not uncommon in the Congress of the United States. One of the ablest men who ever sat in the Senate was Joseph H. Gallinger, M. D., who represented New Hampshire in the House for four years, and in the Senate for over thirty years. No other physician ever reached the pinnacle of fame which was attained by Doctor Gallinger. He was not only one of the oldest men in point of service, but he was easily one of the most influential.

Since his day, with the exception of the senior Senator from the State of New York, no physician has long graced the halls of Congress. Senator Royal S. Copeland is the only representative of his profession in the Senate today, and he has but four confrères in the House of Representatives.

Senator Copeland, formerly of the medical faculty of the University of Michigan, and mayor of Ann Arbor, and later dean of New York Homeopathic-Flower Hospital Medical College, came into the public eye as the commissioner of health in the city of New York, a position he filled with unusual credit for five years. Doctor Copeland was looked upon as one of the most outstanding public health authorities in the country during his term of office, and he was rewarded for his splendid work by election to the Senate in 1923. Senator Copeland was reëlected in 1929, and again in 1935, making him one of the "older brethren" of that august body.

He had as an associate from 1929 to 1935, former Governor Henry Drury Hatfield, M. D., of West Virginia, one of the most prominent surgeons in that State. Unfortunately, the Senator was not reëlected, leaving Senator Copeland to carry the torch alone.

In the House of Representatives are to be found four medical Congressmen, three from the East and one from the Middle West. Dr. William L. Higgins of South Coventry, Connecticut, and a graduate of the University of the City of New York, 1890, represents the Second Connecticut District. He is a former president of the Connecticut State Medical Society; he served sixteen years in the General Assembly of his state, was secretary of state for four years, and was also a county commissioner and a selectman of Coventry. He was first elected to Congress in 1932.

The sole medical representative from the Corn Belt is William H. Larrabee, M. D., of Indiana, a graduate of the Indiana University School of Medicine, and a practitioner in New Palestine for thirty-three years. He belongs to the national, state, and county medical societies, is prominent in fraternal circles, and was formerly a member of the City Council, secretary of the County Board of Health, and a representative in the Indiana General Assembly. He is now serving his sixth year in Congress.

The State of New York has two physician-congressmen in the persons of Joseph L. Pfeiffer, M.D., F.A.C.S., of Brooklyn, and William I. Sirovich, M. D., F. A. C. S., of New York City.

Doctor Pfeiffer is a 1914 graduate of the Long Island College of Medicine, and is assistant surgeon to the Kings County and St. Catherine's hospitals. He recently sent to the Scientific Medical Institutione of Emergency Attendance at Leningrad, Russia, at the request of the Soviet Government, his survey of appendicitis from the years 1920 to 1932, a total of 4,176 cases. Doctor Pfeiffer is prominently connected medically with various of the leading institutions in Brooklyn.

Doctor Sirovich, a graduate of the Columbia College of Physicians and Surgeons in 1906, has been superintendent of the People's Hospital since 1917. He was first elected

(Continued on Page 36)

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The outstanding feature of Mapharsen is its rapidly beneficial effect upon early syphilis. Disappearance of spirochetes occurs promptly. Healing of lesions is rapid and complete. Symptomatic improvement is most satisfactory. Positive Wassermann reactions are reversed in a large percentage of cases.

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■ Pediatricians — Nose and Throat Specialists — diagnosticians — Surgeons — in fact, all physicians — know the undesirable sequel of Mouth Breathing.

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Our BRIDLE FOR MOUTH BREATHERS—when properly applied — will prevent such abnormalities.

PRICE . . . $3.00
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J. L. ROBINSON, INC.
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(Continued from Page 34)

to the Seventieth Congress in 1927, and has been very active in the House since that time. The Doctor is not only a member of various medical organizations and civic groups, but has been an official arbitrator in labor disputes and is much interested in child welfare and copyright matters.

This list constitutes the medical representation in Congress, but dentistry and pharmacy also have exponents in the Capitol.

The senior Senator from Minnesota, Henrik Shipstead, D. D. S., of Minneapolis, was graduated from the Northwestern University Dental School in 1903, and practiced his profession in Glenwood, Minnesota, until 1920, when he removed to Minneapolis. He still maintains an office in that city. The Senator was mayor of Glenwood for two terms, and was in the House of Representatives of his own state. He was first elected to the Senate in 1922, was reëlected in 1928 and in 1934.

In the House of Representatives are two dentists, Frank Crowther, D. M. D., of Schenectady, New York, and John M. O'Connell, D. D. S., of Westerly, Rhode Island.

Doctor Crowther was graduated from Harvard Dental School in 1898, and practiced in Boston until 1901, when he removed to Perth Amboy, New Jersey. In 1912 he went to Schenectady. In New Jersey Doctor Crowther was a member of the House of Assembly, and of the Middlesex County tax board. He was at one time president of the Common Council of Schenectady, and was first elected to Congress in 1919. He has served continuously in the House since that time, now being a member of the Ways and Means Committee.

Doctor O'Connell was graduated from the Philadelphia Dental College (now Temple University Dental School) in 1905 as the valedictorian of his class. He has practiced in Westerly since his graduation, except for sixteen months when he was overseas with the Twelfth Division. The Doctor is prominent in the life of Westerly and in the

(Continued on Page 38)

VACATION TIME

S.M.A. is obtainable wherever vacations take parents in the United States.*

In addition to producing excellent nutritional results more simply and more quickly, S.M.A. has the advantage of availability in all parts of this country.

Parents need take only small quantities of S.M.A. with them when they travel, replenishing their supply as they go.

*S.M.A. is also available in Canada and many foreign countries. Details upon request.

From Maine to California, practically every wholesale drug house in the country carries stocks of S.M.A., and most of the 50,000 retail druggists stock it. In the cities, any retailer who runs out of S. M. A. can get it overnight, and druggists even in the remote rural districts can get S. M. A. quickly when their supply is exhausted. (The map shows locations of wholesale stocks. Retail outlets are too numerous to show here.)

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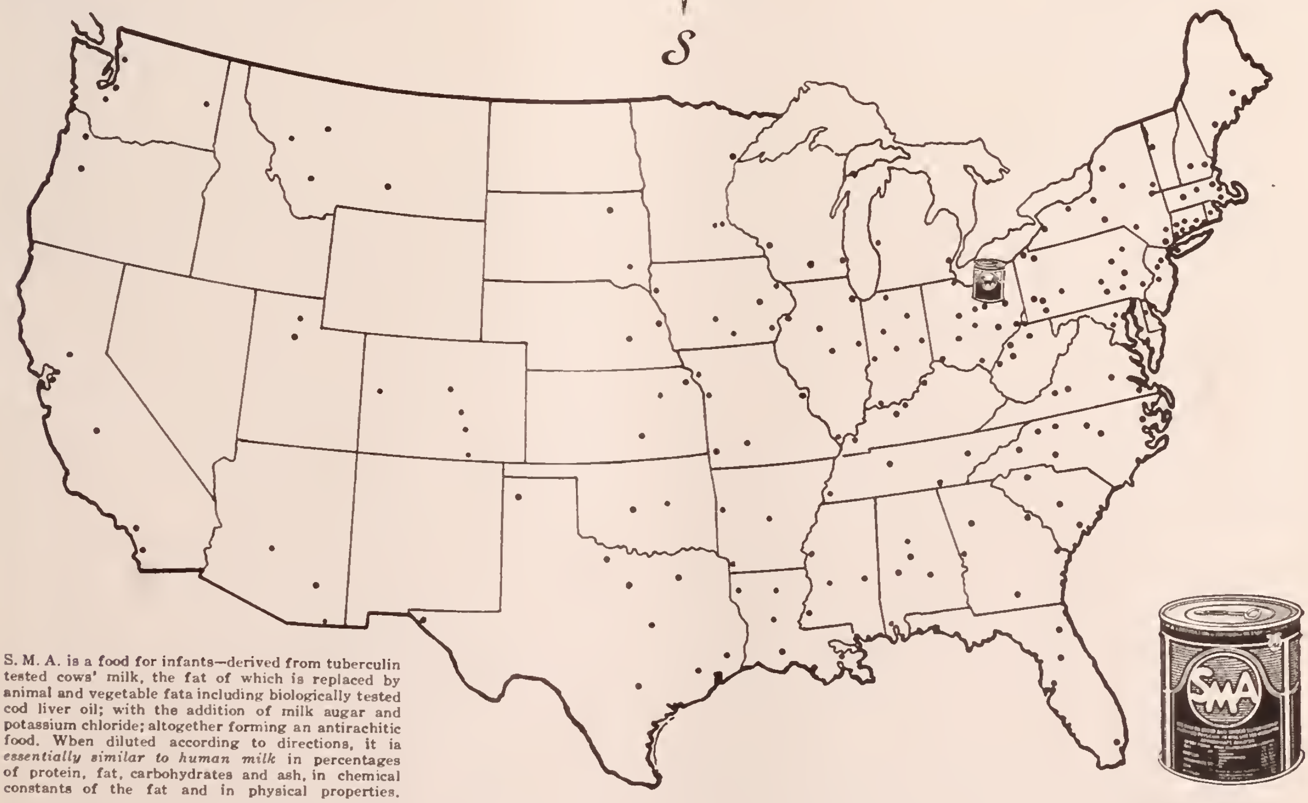

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Garage in Hotel

Dining Room and Coffee Shop Unexcelled Cuisine

HOTEL
Sir Francis Drake
POWELL *at* SUTTER

(Continued from Page 36)

various fraternal groups. He is now serving his second term in Congress.

The sole representative of pharmacy is William D. Thomas, Ph. G., of Hoosick Falls, New York. He was graduated from Union College in 1904, went to the home town at once and continues to be the proprietor of the Thomas Pharmacy in Hoosick Falls. He was town clerk for eight years, a member of the legislature for two years, county treasurer for six years, and has twice been elected to Congress.

Our Canadian medical friends take their politics far more seriously. In the Canadian Senate today there are seven medical men; two each from Ontario and New Brunswick, and one each from Quebec, Manitoba, and British Columbia.

In the Federal House of Commons more than 10 per cent of the members who have been guiding the destinies of Canada during the past five years have been physicians. Twenty-nine out of the total membership of 245 were followers of Aesculapius. Ontario sent 14 physicians out of 82 Representatives to the Federal House; Quebec had 9 out of 65; Saskatchewan 2 out of 21; Alberta 2 out of 7; Manitoba 1 out of 17; and Nova Scotia 1 out of 12.

In addition to this, the provinces of Ontario and Saskatchewan each had a medical man as lieutenant-governor. Be it understood, the chief executive officer of all Canadian provinces is the lieutenant-governor.

Incidentally, the Canadian profession goes into politics in rather a big way. In the provincial legislature of Quebec out of ninety members eight are physicians; in Ontario there are six physicians among 112 members. In New Brunswick one-eighth of the legislature of forty-eight men are doctors. Nova Scotia has four medical members; Saskatchewan, four; British Columbia, three; Prince Edward Island, two; and Alberta, one.

Sixty-three physicians, representing various constituencies in the Dominion and serving at one time, indicate that the medical profession in Canada is determined that its representatives will be heard in the halls of legislation.

Toothaches of Primitive Man.*—That primitive peoples have perfect teeth and that civilized man has acquired his dental troubles because of eating refined foods are ideas which are frequently expounded by reputable scientists as well as by food faddists. There are two possible methods of testing the accuracy of such statements. One method is to study the skeletal remains of early man, and the other is to observe and record the dental condition of existing primitive peoples.

There are far too few specimens of the very early forms of man, such as the Java man, the Piltdown man, or the Peking man, available for the drawing of any conclusions concerning their freedom from dental disorders. It is known that the Neanderthal man, who lived in the last interglacial epoch, suffered from the ravages of pyorrhea. Relatively little weight could be placed upon any immunity to dental diseases in these early types of man since their tooth and jaw structure is quite different from that of the present species of man, homo sapiens.

It is probable that our present species of man, homo sapiens, has always been more or less subject to dental troubles. This may be correlated with the refinement of the bony and muscular structures of the face and jaw, which has allowed man to develop the extremely valuable accomplishment of articulate speech. The men who lived in France during the last glacial period were troubled with carious or decayed teeth. Many of the skeletons of men of this period show decayed teeth. More than 20,000 years ago, in North Africa there lived a white people of the Mediterranean subrace. The type skulls of this culture are in the collection of the University of Minnesota. One of these skulls has teeth in an advanced state of decay.

---

* By Max C. Markley, Ch. E., Ph. D., professor of agricultural biochemistry, University of Minnesota, University Farm, St. Paul, Minnesota.

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Others show the teeth badly worn down by chewing coarse and gritty foods. Many teeth were lost during life and the jaw bones had been diseased.

In Germany caries were common during the Stone Age. One skull of a person living between the sixth and tenth centuries, B. C., exhibits the loss of all but five teeth during life. Of these five remaining teeth, four were carious. It has been estimated that in England, during both the Stone Age and the succeeding Bronze Age, from 10 to 20 per cent of the population suffered from caries. In predynastic Egypt, Ruffer found that 20 per cent of the population had caries, 60 per cent had chronic pyorrhea, and 30 per cent were tortured by abscesses about the roots of the teeth. About this same condition has prevailed throughout the historical period in Egypt.

Among primitive peoples of historic times the aboriginal Australians represent one of the most simple forms of culture. They had neither agriculture nor zoöculture. They ate such vegetable foods as they could find in natural gardens. Since they did not store food, their diet varied from season to season. The flesh of small animals, and even insects, supplemented the vegetable diet. Occasionally they had the flesh of the kangaroo. Krogman, in a study of a large number of pre-English invasion Australian skulls, found 8 per cent of the teeth to be carious, as contrasted with 27 per cent in a similar series of eighteenth century English skulls.

The Zuni Indians of Arizona have been an agricultural people for probably one thousand years. Their diet has been principally from their gardens, including corn, beans, and pumpkins, with the occasional addition of eggs or meat from the village turkey flock, or, even more rarely, the flesh of the rabbit or the deer. Leigh, in a study of Zuni skulls of about the time of the voyages of Columbus, found 75 per cent of the individuals to have had carious teeth, 52 per cent had abscesses around the roots of the teeth, and 56 per cent had suffered the ravages of pyorrhea.

The nomadic Sioux of the western plains lived upon meat, with the addition of wild fruits in season. They dried and stored some of the fruits for winter use. Leigh found the early Sioux to have the best teeth of any of the American Indians. Less than one-sixth of the population suffered from the various tooth disorders. In a study of an agricultural Algonquin tribe in Kentucky, he found another type of tooth trouble to be very prevalent. This was a widespread infection of the jaw bones, due to the exposure of the pulp of the teeth, which in turn was caused by the excessive attrition of gritty foods. These people lived largely upon corn, which was coarsely ground in stone mortars. He attributes the wearing away of the teeth to fragments of the stone mortars and to the large amount of silicious material in the hulls of the corn.

Stewart, after examining a large number of pre-Spanish Inca skulls from Peru, considered caries to be very prevalent. He found by count that, on an average, over 20 per cent of the molars were carious. This is in close agreement with the findings of Leigh for the Zuni tribe of Arizona, whose culture and food habits were similar.

The most perfect teeth among primitive peoples may well be those of the Bantu tribes of southern Africa. Shaw, in a study of a large number of Bantu skulls found only 4 per cent of the molars to be carious. This is in sharp contrast to the 20 per cent of carious molars in the Incas and the Zunis, and to the 40 per cent in present-day Americans and Europeans. The Bantus, in their undisturbed native culture, were largely a farming and cattle-raising people. Their diet included much milk, liberal amounts of meat, cereals, and vegetables as well as fruits in season.

The reasons for the greater incidence of tooth disorders in the civilized peoples of America and Europe than among primitive peoples are many and frequently obscure. The work of Hrdlicka and others with the Esquimos indicate that inherent racial differences in susceptibility to dental diseases may not be the answer. The effects of dental hygiene are difficult to demonstrate in the studies

(Continued on Next Page)

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(Continued from Preceding Page)

of primitive peoples, but cannot be minimized. The effect of the clothing of civilized man in interfering with the absorption of the ultra-violet rays of the sun may be important in this respect. It is probable that there is an optimum amount of vitamin D required for the production of resistant dental enamel. From a study of primitive diets it appears that the total amount of minerals present in the food is not the important factor, but that the ability to utilize this mineral matter is the fundamental consideration. For example, the Sioux living on a low-mineral diet, but in a sunny climate, and wearing light clothing much of the time, had very good teeth. There is no evidence that a return to a diet heavy in coarsely ground and unbolted cereals would materially help the dental situation.

The lengthening of the average life with the advance of civilization must be considered when one compares the teeth of modern civilized man with those of primitive groups. Teeth which would be suitable for a life of thirty-five years may not be at all well adapted to a span of seventy years. The survival of weak individuals under the softer civilized conditions may also be a factor.

The following quotations from an article by Doctor Krogman in a recent issue of the *American Journal of Physical Anthropology* well sums up this subject. "When this correction (for carious missing teeth) has been made, and when age, sex, environmental and group homogeneity factors are considered, it willl be found that the difference in the frequency of dental caries is not so marked between early or primitive peoples and civilized peoples as is generally believed.

"Apparently, the so-called soft foods of the present age are not necessarily a contributing factor to dental caries, but, on the other hand, the coarse foods might cause serious tooth trouble."

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Help for Hard-of-Hearing Children.—The Otologic Section of the California Medical Association has organized a committee of twenty members to study the problems of the hard-of-hearing in California, with particular reference to the early detection of impaired hearing among children. The outline suggested by the committee is as follows:

1. The development of a closer coöperation between the otologists and other agencies concerned with "Problems of the Hard-of-Hearing" (economic, social, educational).

2. The promotion of annual hearing tests by means of 4A audiometer for all pupils in public and private schools.

3. The establishment of classes for the teaching of lip-reading in all public and private schools in California; this to include classes for hard-of-hearing adults as well as children.

4. The scientific fitting and prescribing by qualified otologists of individual hearing aids for the hard-of-hearing.

5. The installing of group hearing aids in places of public assembly, *i. e.*, churches, theaters, public and school auditoriums, etc.

The chairman of the committee, Dr. Francis L. Rogers of Long Beach, states: "The otologists of California earnestly desire to coöperate in a 'work together' program for the prevention and cure of deafness. One in every ten persons in the United States is said to have impaired hearing. Most of this is preventable or curable. Every child who repeats his grade in school because of impaired hearing suffers a personal loss and the state suffers, in the aggregate, a huge economic loss. By united action California can and should lead the nation in a program which offers relief from much human suffering, a great social uplift and better opportunities for these handicapped citizens."

The members of the 1935-1936 committee are as follows: Doctors Harold A. Fletcher, section chairman (member ex officio), Medico-Dental Building, San Francisco; Dean E. Godwin, section secretary (member ex officio), 820 Professional Building, Long Beach; Isaac H. Jones, 1930 Wilshire Boulevard, Los Angeles; Frank A. Burton, Bank of America Building, San Diego; Frank S. Baxter, 1624 Franklin Street, Oakland; J. Roy Jones, California Western States Life Building, Sacramento; Peter A. Jordan, 241 West Santa Clara Street, San Jose; Dewey Powell, 242 North Sutter Street, Stockton; Joseph Chiapella, Chiapella Building, Chico; Harris D. Newkirk, Anaheim; B. F. Walker, Fresno; L. L. Henninger, Pasadena; Arthur W. Walker, Riverside; Ray M. Moose, San Bernardino; Harold L. Snow, San Pedro; William J. Mellinger, Santa Barbara; Fred E. Earel, Santa Ana; Robert C. Martin, Fitzhugh Building, San Francisco; Francis L. Rogers, chairman, 360 Junipero Avenue, Long Beach.

Cutting Their Fee.*—Doctors W. L. Crosthwait and W. L. Souther of Waco, Texas, literally "extracted" their fee from a wounded man whom they attended. In December, 1923, Jose Flores was riding a horse near Waco when a man with whom he had a quarrel rode up beside him, stuck a .45 revolver in his left side and fired. Due to the explosive effect of the bullet at close range the wound was very large, and in cleaning it out the doctors found pieces of clothing and a compact wad of foreign substance, which proved to be three $50 bills, folded tightly. The money, damaged, was turned over to a bank, sent to Washington for exchange, and the new money was tendered to the doctors as their fee. The patient, Flores, made a nice recovery and is still living.

---

* Excerpt from Ripley's "Believe It or Not," April 28, 1936.

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United States Court Fines and Reprimands Manufacturer of Low-Strength Disinfectant for Hospital Use.—The Century Chemical Products Company, Detroit, Michigan, was fined $300 and rebuked by the court on May 15 in an action under the Federal Insecticide Act. The Food and Drug Administration, in comment on the action, says the company's product, known as "De-Germ," was offered as a disinfectant and germicide for use in theaters, hospitals, schools and other public places. It was tested by government bacteriologists and found to be ineffective against some of the commoner forms of bacteria, even when used full strength. Analysis showed it to be a weak solution of formaldehyd (1½ per cent), phenolic substances, soap and perfume materials in water (96 per cent).

Judge Lederle, in passing sentence, remarked that the penalties prescribed by the law are not adequate to punish the violation involved in this case. In his opinion, persons not trained in the testing and use of disinfectants should not be allowed to engage in their manufacture. None of the officers of the company, it developed, were so trained, and they employed no chemist or other experienced person who might make up for their deficiency.

Disinfectants, which are germicidal preparations, are subject to the Federal Insecticide Act, under a provision applying specifically to products claimed to be effective against "fungi that may infest vegetation or be present in any environment whatsoever." The law, of primary benefit to farmers and growers dependent upon agricultural insecticides and fungicides to guarantee a fair return on their investment, is thus shown to have a wide scope. It touches all classes of people. It is the view of the Food and Drug Administration that the seller of a so-called disinfectant for use in places where a weak or worthless preparation constitutes a major public health hazard, as in schools and hospitals, has not a proper regard for his responsibilities if he does not determine by thorough tests that his product is actually effective.

●

VITAMINS IN CANNED FOODS

I. VITAMIN C

● The history of scurvy is as old as the history of exploration and conquest. Its ravages among early explorers and invaders are recorded in the oldest pages of history, due principally to the fact that during extended sea voyages or treks by land, dependence had necessarily been placed almost entirely on foods preserved by the crude methods of the day.

Scurvy was the first vitamin deficiency disease to be controlled by dietary management. In 1757, Lind recognized the fact that some substance in foods exerted a specific protective action against scurvy (1). As early as 1804, the daily lime juice ration became compulsory in the British Navy (2).

However, it remained for modern biochemical science to establish the chemical identity of this antiscorbutic factor. Vitamin C is now known to be identical with cevitamic acid (levo-ascorbic acid) and is as yet the only vitamin to be synthesized in the laboratory (3).

There would appear to be no valid reason why scurvy should ever constitute a serious threat to the health of the average American infant or adult. Development of refrigerated transportation for raw foods and improvements in modern methods of food preservation, specifically canning methods, make available to the consumer during the entire year a large variety of foods possessed of valuable vitamin C contents. In addition, the modern trend towards education of the layman, in regard to the vitamin C requirements of both the infant and the adult, should also assist in complete eradication of infantile and adult scurvy from America.

Many canned foods are to be valued as contributors of vitamin C. Nutritional research has indicated that canned products such as the citrus fruits or citrus fruit juices (4), the more common fruits (5), and vegetables or vegetable juices, are important sources of the antiscorbutic factor (6). Modern canning procedures afford a good degree of protection to this labile vitamin, with the result that the canned food can be relied upon to supply amounts of vitamin C to the diet consistent with the amounts of the vitamin originally contained in the raw food from which it was prepared.

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(1) Vitamins: A Survey of Present Knowledge. Page 187 Medical Research Council, Special Report 167. 1932. His Majesty's Stationery Office, London.
(2) Vitamins in Theory and Practice. Page 86, L. J. Harris, 1935. Macmillan, New York.
(3) 1933 J. Chem. Soc. *136*, 1419.
(4) 1930 J. Home Econ. *22*, 588.
(5) 1935 Amer. Jour. Pub. Health, *25*, 1340.
(6) 1933 Ind. Eng. Chem. *25*, 682.

This is the fourteenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

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Spray Residue Case Involves Important Test of Food Law.—Consumers of foods who look to the Federal Food and Drugs Act for protection have a stake in the outcome of litigation arising out of a seizure action under that act against a shipment of apple chops, an apple by-product, containing lead and arsenic spray residue. The United States District Court at St. Louis has just handed down a decision unfavorable to the Government. Consideration is being given at this time to the matter of seeking a review of the judgment of the trial court by way of appeal.

The Washington Dehydrated Food Company of Yakima, Washington, shipper of the consignment, contested the Government's allegations that the article contained added poisonous ingredients which might render it injurious to health. At the trial, testimony for the Government was presented by toxicologists and specialists who emphasized the potential danger to health involved in the continued consumption over a period of time of foods containing minute doses of lead and arsenic. One medical witness for the claimant admitted that, above a certain point of tolerance or quantity of lead which an individual can take up, he exhibits signs of intoxication from lead. Another medical witness for the claimant gave it as his opinion that the amount of arsenic and lead in these chops involved no public health danger. The president of the claimant firm testified that some susceptible individuals might, under certain conditions, be injured by the apple chops in question.

The Department of Agriculture has consistently maintained that foods containing added arsenic and lead in amounts held by qualified scientific opinion to be poisonous or deleterious constitute a definite menace to public health and, under the pure food law, are subject to action. As the result of intensive activities over a period of many years the Food and Drug Administration encounters today relatively few interstate consignments of fruits or fruit by-products containing dangerous quantities of lead and arsenic.

The Washington Dehydrated Food Company was found guilty in 1933 in the federal court in Yakima, Washington, of a violation of the Federal Food and Drugs Act in shipping in interstate commerce stocks of apple chops carrying residues of poisonous lead and arsenical sprays which might render them injurious to health. The firm later marketed apple chops containing lead and arsenic in amounts deemed by eminent toxicologists to be capable of injury to health. One of these shipments involved a consignment destined for export to France. The Government instituted seizure proceedings when lead and arsenic in such amounts were found, taking the position that the pure food law does not sanction the practice of making foreign countries a dumping ground for foods not measuring up to the criteria of fitness set for our own country. The lower federal court in that instance, however, ruled against the Government, holding that the shipment fell

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within a proviso in the food law exempting, under certain conditions, violative shipments consigned to foreign shores. The court also expressed doubt as to the deleteriousness of the material.

An outgrowth of this adverse decision was the institution of a suit for damages by the president of the Washington Dehydrated Food Company against administrative officials of the Department of Agriculture who, in carrying out their duty, had reported the facts as to the arsenic and lead content of the export shipment. The civil suit for damages resulted in a hung jury and is of vital interest to every consumer, since in its larger aspects it involved the question as to whether a federal officer, in the discharge of his official duties under the Food and Drugs Act, can be held personally liable for damages for reporting facts to his superiors in the event of an adverse court decision under the Food and Drugs Act. The action in St. Louis is the most recent chapter in the various legal actions which have grown out of shipments by the Washington Dehydrated Food Company.

Illegal Drug Products.—The following prosecutions involving drug products in violation of the federal law also were terminated by the Federal Food and Drug Administration: Chicken Pharmacy, Petaluma, Calif., shippers of "C. P. Poultry Pox Remedy" and "Zink's White Diarrhoea Tablets," falsely and fraudulently represented as remedies for chicken-pox and intestinal troubles of poultry and chicks, fine $10; Dia-Bet Laboratories, Detroit, Mich., "Dia-Bet," a water solution of plant extracts including blueberry leaves, with sodium benzoate, offered as a treatment for diabetes, fine $400; Ehrhart & Karl, Inc., Chicago, Ill., "Sulfo-Kresol-Tabs," tablets containing oxyquinolin sulphate and lactose, but no cresol, represented as antiseptic and as a disinfectant, but found on test to be non-germicidal, for inflammatory conditions, septicemia and ulcerated throat, fine $50 and costs; Pearson Remedy Company, Burlington, N. C., "Old Indian

(Continued on Page 47)

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(Continued from Page 45)

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Psychiatrists tell us that there is a certain type of individual who overreacts to the stimulus of great danger. When confronted with the sudden danger of an automobile accident, for example, these persons instinctively throw out their arms and legs with such force that they step hard on the accelerator and sometimes cause a serious accident to happen.

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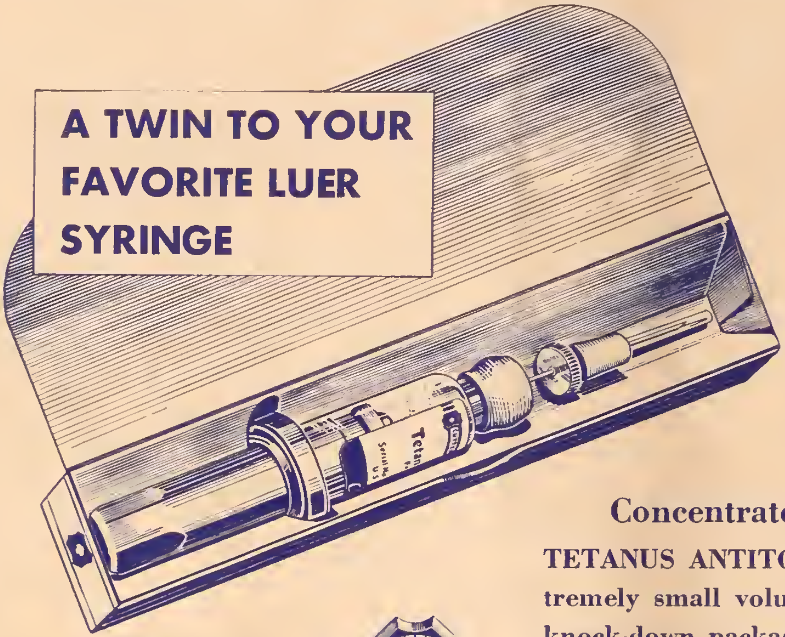

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Fifth District—Monterey, San Benito, San Mateo, Santa Clara and Santa Cruz Counties, Alfred L. Phillips (1939), Farmers and Merchants Bank Building, Santa Cruz.

Sixth District—San Francisco County, Karl L. Schaupp (1937), 530 Medico-Dental Building, 490 Post Street, San Francisco.

Seventh District—Alameda and Contra Costa Counties, Oliver D. Hamlin (1938), Federal Realty Building, Oakland.

Eighth District—Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo, and Yuba Counties, C. E. Schoff (1939), 322 Medico-Dental Building, 1127 Eleventh Street, Sacramento.

Ninth District—Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Siskiyou, Solano, Sonoma and Trinity Counties, Henry S. Rogers (1937), Petaluma.

Councilors-at-Large

Harry H. Wilson (1938), 1919 Wilshire Boulevard, Los Angeles.

C. O. Tanner (1939), 3255 Fourth Street, San Diego.

William H. Kiger (1937), 911 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Morton R. Gibbons (1938), Union Square Building, 350 Post Street, San Francisco.

T. Henshaw Kelly (1939), 830 Medico-Dental Building, 490 Post Street, San Francisco.

Junius B. Harris (1937), Medico-Dental Building, 1127 Eleventh Street, Sacramento.

Standing Committees

Executive Committee

The President, the President-elect, the Speaker of the House of Delegates, the Chairman of the Council, the Chairman of the Auditing Committee, the Chairman of the Committee on Public Relations, the Secretary-Treasurer and the Editor. (Karl L. Schaupp, chairman; Frederick C. Warnshuis, secretary.)

Auditing Committee

O. D. Hamlin	Oakland	1937
T. Henshaw Kelly	San Francisco	1937
Karl L. Schaupp (Chairman)	San Francisco	1937

Members of the Auditing Committee are appointed each year by the Chairman of the Council.

Committee on Associated Societies and Technical Groups

John V. Barrow	Los Angeles	1937
William J. Kerr (Chairman)	San Francisco	1938
William H. Geistweit	San Diego	1939

Committee on Health and Public Instruction

Benjamin W. Black	Oakland	1937
Fred B. Clarke (Chairman)	Long Beach	1938
W. R. P. Clark	San Francisco	1939

Committee on History and Obituaries

Georoge D. Lyman	San Francisco	1937
Frank R. Makinson (Chairman)	Oakland	1938
J. Marion Read	San Francisco	1939

Secretary ex officio
Editor ex officio

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Karl L. Schaupp	San Francisco	1937
John C. Ruddock	Los Angeles	1938
Daniel Crosby (Chairman)	Oakland	1939

Committee on Industrial Practice

Harry E. Zaiser	Orange	1937
Morton R. Gibbons (Chairman)	San Francisco	1938
Mott H. Arnold	San Diego	1939

Committee on Medical Defense

John P. Nuttall	Santa Monica	1937
George G. Reinle (Chairman)	Oakland	1938
Fred R. De Lappe	Modesto	1939

Committee on Medical Economics

Willard Stone	Pasadena	1937
John H. Graves (Chairman)	San Francisco	1938
William R. Molony, Sr.	Los Angeles	1939

Committee on Medical Education and Medical Institutions

John B. Doyle	Los Angeles	1937
B. O. Raulston	Los Angeles	1938
Loren R. Chandler (Chairman)	San Francisco	1939

Committee on Membership and Organization

G. Dan Delprat	San Francisco	1937
E. Vincent Askey (Chairman)	Los Angeles	1938
Dewey R. Powell	Stockton	1939

Secretary ex officio

Committee on Postgraduate Activities

John C. Ruddock	Los Angeles	1937
Clarence G. Toland (Chairman)	Los Angeles	1938
F. F. Gundrum	Sacramento	1939

Secretary ex officio

Committee on Publications

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Ruggles A. Cushman	Talmadge	1938
Oscar Reiss	Los Angeles	1939

Secretary ex officio
Editor ex officio

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Junius B. Harris (Chairman)	Sacramento	1938
T. Henshaw Kelly	San Francisco	1939

President ex officio
President-elect ex officio

Committee on Scientific Work

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J. Homer Woolsey	Woodland	1938
F. M. Pottenger	Monrovia	1939

Edwin L. Bruck, Secretary of Section on General Medicine, ex officio
John M. Schmoele, Secretary of Section on General Surgery, ex officio
Frederick C. Warnshuis (Chairman), ex officio

Committee on Public Relations

The Committee on Public Relations consists of the chairmen of the following standing committees and of certain general officers of the Association, all serving ex officio. The chairman of the committee is Charles A. Dukes, the secretary is Frederick C. Warnshuis. The director of the Department of Public Relations is Frederick C. Warnshuis. The chairman of the Committee on Public Relations is ex officio a member of the Council.

Fred B. Clarke	Chair., Com. on Health and Public Instruction
Daniel Crosby	Chair., Com. on Hospitals, Dispensaries, Clinics
Morton R. Gibbons	Chair., Com. on Industrial Practice
E. Vincent Askey	Chair., Com. on Membership and Organization
John H. Graves	Chair., Com. on Medical Economics
Junius B. Harris	Chair., Com. on Public Policy and Legislation
Charles A. Dukes	Chair., Cancer Commission
Clarence G. Toland	Chair., Com. on Postgraduate Activities
Edward M. Pallette	President of Califorina Medical Association
Howard Morrow	President-elect
Frederick C. Warnshuis	Secretary-Treasurer

Communications for the Public Relations Department should be addressed to the Director, Frederick C. Warnshuis, M. D., Room 2004, 450 Sutter Street, San Francisco.

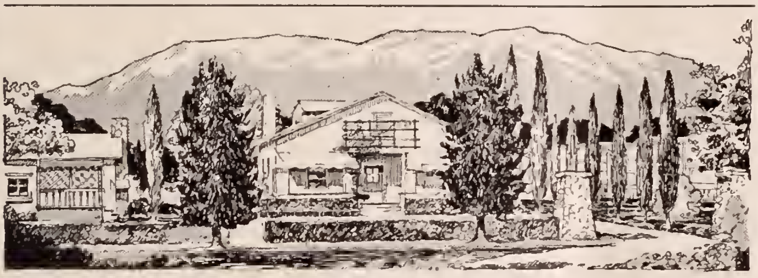
Cancer Commission

Charles A. Dukes (Chairman)	Oakland	1937
Lyell C. Kinney (Vice-Chairman)	San Diego	1937
Alson R. Kilgore (Secretary)	San Francisco	1937
Orville Meland (Sec'y for Southern Section)	Los Angeles	1938
A. Herman Zeiler	Los Angeles	1938
Gertrude Moore	Oakland	1938
Harold Brunn	San Francisco	1939
Henry J. Ullmann	Santa Barbara	1939
Clarence G. Toland	Los Angeles	1939

Communications for the Cancer Commission should be addressed to the secretary, A. R. Kilgore, M. D., Room 2004, 450 Sutter Street, San Francisco.

(Roster lists of officers of scientific sections, component county societies, Woman's Auxiliary, A. M. A. delegates, special committees, etc., are continued on advertising pages 4 and 6.)

SUMMER COURSE IN
OPERATIVE SURGERY OF THE ABDOMEN
SEPTEMBER 22 to 30, 1936
Especial attention will be given to the latest development in the surgery of the Stomach, Gall-Bladder, Intestines, Colon, and Rectum. A brief review will be given of surgical anatomy of the various regions, with demonstration on carefully dissected cadavers. The work will consist of lectures, laboratory work on cadavers and fresh human material, and demonstrations and assisting on the living. Fee, $125.
SAN FRANCISCO POLYCLINIC AND POSTGRADUATE COLLEGE
William E. Stevens, President   *For further particulars apply to*   Otto G. Freyermuth, Secretary
A. J. REMMEL, M. D., *Director of Operative Surgery*   1535 JACKSON STREET, SAN FRANCISCO



SOUTHERN SIERRAS SANATORIUM
C. E. ATKINSON, M. D. . . . . *Medical Director*

SOUTHERN SIERRAS SANATORIUM
BANNING, CALIFORNIA
For Tuberculosis and Allied Affections
Has established and maintained a reputation, both among physicians and patients, for service and satisfaction.
Doctor: Send your next patient here, and you may feel assured not only that he will receive maximum benefit from his sojourn, but he will be grateful and will thank you for sending him to
SOUTHERN SIERRAS SANATORIUM

Many Deaths from Accidental Causes.—In 1935 there were 5,774 deaths in California due to external causes as compared with 5,567 such deaths in 1934 and 5,153 in 1933. This increase in 1935 occurred in spite of a reduction in the total number of motor-vehicle deaths and may be attributed largely to an increased number of falls in the home. Eight hundred five deaths last year were due to this cause as compared with 662 in 1934 and 660 in 1933. Almost half of all accidental deaths last year were due to motor-vehicle accidents and one-quarter of the total was due to accidents in the home.

Motor-Vehicle Deaths

Out of a total of 2,786 motor-vehicle deaths 1,043 were due to collisions with pedestrians, 854 to collisions with other motor vehicle, 200 to collisions with fixed objects, and 514 such deaths were in noncollision accidents. There were but eighty-seven deaths due to collisions with railroad trains, forty-eight with electric cars, thirty-seven with bicycles, and three with horse-drawn vehicles. Motor-vehicle deaths were quite evenly distributed among all age groups.

Deaths in Home Accidents

Out of a total of 1,398 deaths in this group, 805 were due to falls, 251 to conflagrations, burns and explosions, 93 to poisonings, 60 to absorption of poisonous gases, 43 to firearms, and 39 mechanical suffocations, 27 of which were in infants.

Considerably more than one-half of all deaths due to home accidents were in persons more than fifty-five years of age whose deaths were due to burns and falls.

Deaths in Public Accidents

In this group there were 1,045 deaths recorded last year, 324 of which were due to drowning, 211 due to falls, 118 railroad accidents, and 67 street-car accidents not involving motor vehicles. There were deaths in water transportation and forty-nine deaths in air transportation. The most important single cause of death in this group is drowning, almost one-third of the total being due to this cause.

Occupational Deaths

There were but 477 deaths in this group last year, 142 of which were due to accidents in general trades. Among other specific groups the following deaths were registered last year: agriculture, 88; construction, 67; transportation and public utilities, 60; mining and quarrying, 48.

AVAILABLE THROUGH ALL PHARMACIES
EMMENIN
The orally active, oestrogenic placental extract elaborated by Dr. J. B. Collip, Department of Biochemistry, McGill University.
(Canadian Medical Association Journal, February, 1930.)
IMPORTANT ANNOUNCEMENT . . .
By an improved technique developed in our laboratories, we have been able to render Emmenin entirely free from disagreeable taste and odor. This has been accomplished without loss of therapeutic activity, and the potency is ensured by carefully controlled biological assay.
DETAILS ON REQUEST
Emmenin is biologically assayed and standardized under direct control of the Department of Biochemistry, McGill University.
Manufactured by
Ayerst, McKenna & Harrison
(United States) Limited
Biological and Pharmaceutical Chemists
ROUSES POINT   NEW YORK
Available in liquid form in original 4-ounce bottles.
BROEMMEL LABORATORIES
SAN FRANCISCO

There were but thirteen accidental deaths in the manufacturing group and seven in clerical and professional service.

There are more than two hundred recognized means by which human life is terminated. Heart disease today leads all of them in the toll it takes.

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Secretary, William LeRoy Garth, Medico-Dental Building, 233 A Street, San Diego.

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Chairman, Thomas J. Clark, 400 Twenty-ninth Street, Oakland.

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Vice-Chairman, Clifford Walker, 427 West Fifth Street, Los Angeles

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Secretary, Edwin L. Bruck, 384 Post Street, San Francisco.

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Assistant Secretary, Nelson J. Howard, 2814 Lyon Street, San Francisco.

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Secretary, Mott H. Arnold, 1220 First National Bank Building, 1007 Fifth Street, San Diego.

Neuropsychiatry

Chairman, J. M. Nielsen, 1253 Roosevelt Building, 727 West Seventh Street, Los Angeles.

Secretary, Fred O. Butler, Sonoma State Hospital, Eldridge.

Obstetrics and Gynecology

Chairman, Donald G. Tollefson, 511 South Bonnie Brae, Los Angeles.

Vice-Chairman, R. Glenn Craig, Medico-Dental Building, 490 Post Street, San Francisco.

Secretary, George W. Coon, 3770 Twelfth Street, Riverside.

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Secretary, George D. Maner, 657 South Westlake Boulevard, Los Angeles.

Assistant Secretary, Zera E. Bolin, 490 Post Street, San Francisco.

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Chairman, Edward B. Shaw, 384 Post Street, San Francisco.

Secretary, E. E. Moody, 3780 Wilshire Boulevard, Los Angeles.

Assistant Secretary, Hartzell H. Ray, 23 Second Avenue, San Mateo.

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Secretary, John D. Lawson, 1306 California State Life Building, Sacramento.

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Chairman, Adolph A. Kutzmann, 1930 Wilshire Boulevard, Los Angeles.

Secretary, Lloyd E. Kindall, 400 Twenty-ninth Street, Oakland.

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2404 Broadway, Oakland

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Secretary, Gertrude Moore, 2404 Broadway, Oakland.

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President, Leslie Freudenthal, Gridley.

Secretary, Frank C. Reynolds, Box 614, Chico.

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President, Harry G. Ford, 314 Tenth Street, Richmond.

Secretary, Thomas J. Dozier, 202 G Street, Antioch.

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President, Kenneth Staniford, 904 Mattei Bldg., Fresno.

Secretary, Henry A. Randel, Box 2308, Fresno.

Humboldt County Medical Society

President, Joseph S. Woolford, 350 E Street, Eureka.

Secretary, L. A. Wing, Eureka.

Imperial County Medical Society

President, Floyd A. Burger, Box 193, El Centro.

Secretary, Merritt C. Canfield, 204 Professional Building, El Centro.

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President, L. H. Fox, 2025 Eighteenth Street, Bakersfield.

Secretary, C. S. Compton, 1911 Seventeenth Street, Bakersfield.

Kings County Medical Society

President, William F. Chamlee, Hanford.

Secretary, William A. Johnstone, Hanford.

Lassen-Plumas-Modoc County Medical Society

President, C. I. Burnett, Susanville.

Secretary, Fred J. Davis, Jr., Westwood.

Los Angeles County Medical Association

1925 Wilshire Boulevard

President, Harlan Shoemaker, 1930 Wilshire Boulevard, Los Angeles.

Secretary, E. Vincent Askey, 1925 Wilshire Boulevard, Los Angeles.

Marin County Medical Society

President, J. O. Hawkins, Cheda Building, San Rafael.

Secretary, Carl W. Clark, Alhert Building, San Rafael.

Mendocino-Lake County Medical Society

President, Rudolph B. Toller, Talmage.

Secretary, J. J. Kirwin, Ukiah.

Merced County Medical Society

President, J. S. Webster, Mariposa.

Secretary, Fred O. Lien, Shaffer Building, Merced.

Monterey County Medical Society

President, John A. Merrill, 308 Spazier Building, Monterey.

Secretary, E. F. Kehr, Drawer DD, Carmel.

Napa County Medical Society

President, Laurence Welti, 1130 First Street, Napa.

Secretary, M. M. Booth, 1379 Main Street, St. Helena.

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President, John D. Ball, 414 Spurgeon Building, Santa Ana.

Secretary, Glenn Curtis, 323 So. Pomona Street, Brea.

Placer County Medical Society

President, Louis E. Jones, Roseville.

Secretary, R. A. Peers, Colfax.

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President, E. P. Miller, 3780 Twelfth Street, Riverside.

Secretary, T. A. Card, Glenwood Block, Riverside.

Sacramento Society for Medical Improvement

President, Frank A. MacDonald, 822 Medico-Dental Building, Sacramento.

Secretary, Norris Jones, 1127 Eleventh Street, Sacramento.

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President, L. C. Hull, Hollister.

Secretary, L. E. Smith, Hollister.

San Bernardino County Medical Society

President, D. C. Mock, 215 Cajon Street, Redlands.

Secretary, A. E. Varden, 575 Fifth Street, San Bernardino.

San Diego County Medical Society

Fourteenth Floor, Medico-Dental Building, 233 A Street, San Diego

President, Benjamin F. Eager, 711 Medico-Dental Building, 233 A Street, San Diego.

Secretary, Winston C. Crabtree, 14th Floor, Medico-Dental Building, 233 A Street, San Diego.

San Francisco County Medical Society

2180 Washington Street, San Francisco

President, Philip K. Gilman, 2000 Van Ness Avenue, San Francisco.

Secretary, Stanley H. Mentzer, 2180 Washington Street, San Francisco.

San Joaquin County Medical Society

President, C. A. Broaddus, 907 Medico-Dental Building, Stockton.

Secretary, George H. Rohrbacher, Medico-Dental Building, Stockton.

San Luis Obispo County Medical Society

President, Lyman T. Wade, 759 Monterey Street, San Luis Obispo.

Secretary, E. D. Anderson, 1120 Morro Street, San Luis Obispo.

(Roster lists continued on advertising page 6)

San Mateo County Medical Society

President, Olin M. Holmes, 23 Second Street, San Mateo.

Secretary, J. Garwood Bridgman, 205 Third Avenue, San Mateo.

Santa Barbara County Medical Society

President, P. A. Gray, 317 West Pueblo Street, Santa Barbara.

Secretary, William H. Eaton, Health Department, Santa Barbara.

Santa Clara County Medical Society

President, R. Stanley Kneeshaw, 404 Medico-Dental Building, San Jose.

Secretary, Leslie B. Magoon, Medico-Dental Building, San Jose.

Assistant Secretary, Daniel Bilker, Medico-Dental Building, San Jose.

Santa Cruz County Medical Society

President, Frank E. Blaisdell, 409 E. Third Street, Watsonville.

Secretary, Samuel B. Randall, Farmers and Merchants Natl. Bank Bldg., Santa Cruz.

Shasta County Medical Society

President, M. D. Pratt, Fall River Mills.

Secretary, F. H. Olberg, Craddock Building, Redding.

Siskiyou County Medical Society

President, C. C. Dickinson, McCloud.

Secretary, E. F. Carlson, Fort Jones.

Solano County Medical Society

President, A. E. Chappell, 727 Sonoma Street, Vallejo.

Secretary, J. W. Green, Box 539, Vallejo.

Sonoma County Medical Society

President, Paul T. Quarry, 213A Exchange Avenue, Santa Rosa.

Secretary, C. M. Carlson, 1055 Fourth Street, Santa Rosa.

Stanislaus County Medical Society

President, Hans Hartman, 1005 L Street, Modesto.

Secretary, E. F. Hagedorn, Box 834, Modesto.

Tehama County Medical Society

President, Arthur H. Meuser, Corning

Secretary, F. J. Bailey, Red Bluff.

Tulare County Medical Society

President, J. C. McClure, Lindsay.

Secretary, Karl F. Weiss, Security First National Bank Building, Visalia.

Ventura County Medical Society

President, Fred A. Shore, 704 E. Santa Clara Street, Ventura.

Secretary, A. A. Morrison, 625 Main Street, Santa Paula.

Yolo-Colusa-Glenn County Medical Society

President, T. E. Cooper, Davis.

Secretary, Ray E. Nichols, Woodland.

Yuba-Sutter County Medical Society

President, Francis P. Wisner, 715 Hart Building, Marysville.

Secretary, Fred W. Didier, Wheatland.

●

VITAMINS IN CANNED FOODS

II. VITAMIN D

• One of the most interesting chapters in the history of the science of nutrition is that relating to vitamin D. It is a record of steady advances in our knowledge concerning the vitamin. Starting with the work of Huldschinsky in 1919 on the ultraviolet irradiation of rachitic children; passing to the classical discovery in 1924 by Steenbock (1) and by Hess (2) that irradiated foods may acquire antirachitic potency; and extending through the profound studies of Windaus (3) and other investigators, on the constitution of the pure vitamin D obtained by ultraviolet irradiation of ergosterol, the story of vitamin D is a story of steady, scientific progress.

As a result of these basic contributions, there are available today a number of excellent standardized carriers of vitamin D. Viosterol, and the fish liver oils, and their concentrates, are readily available for use in the campaign against rickets whose prevalence, especially among infants in large urban centers, still remains high. In addition to these vitamin D carriers, the vitamin D fortified or irradiated foods have appeared within recent years.

It has become increasingly evident that there are a number of compounds which may promote calcification in the various animal species. It is further evident that these compounds vary in their physiologic efficiency with various animal species, or that they are "species specific". A number of forms of vitamin D have been postulated (4) and much research in the vitamin D field has been directed toward their isolation and identification.

In general, natural foods have never been regarded as important sources of vitamin D. The commonest food articles show extremely low antirachitic potencies when measured by conventional methods. However, recent evidence has been offered that the contribution of vitamin D made by a varied diet of canned foods may be more significant than has heretofore been supposed (5). While common foods admittedly cannot supply the high demands of infancy and childhood or other phases of the life cycle, for vitamin D, it would appear that they may supply significant amounts of the vitamin to the diet, especially in the case of the adult human, concerning whose quantitative vitamin D requirement comparatively little is known.

Biological research has shown that canned marine products such as salmon, shrimp, and oysters (6) make a small but definite contribution of the antirachitic factor to the diet. We desire to direct the attention of our readers to these interesting facts about canned foods in general, and these canned marine products in particular.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

(1) 1924. J. Biol. Chem. *61*, 405
(2) 1924. J. Biol. Chem. *62*, 301
(3) 1932. Ann. 492, 226
(4) 1935. Physiological Reviews *15*, 1-97
(5) 1934. Ind. Eng. Chem. *26*, 758
(6) a. 1935. J. Home Econ. *27*, 658
b. 1933. Science, *78*, 368
c. 1926. Wis. Agr. Expt. Sta. Bul. *388*, 124

This is the fifteenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Committee on Foods of the American Medical Association.

Woman's Auxiliary to the California Medical Association

State Auxiliary Officers

President, Mrs. A. J. Thornton, 2704 Twenty-ninth Street, San Diego.
President-Elect, Mrs. S. N. Weil, Rodeo.
First Vice-President, Mrs. Clifford A. Wright, 454 So. Irving Boulevard, Los Angeles.
Second Vice-President, Mrs. John V. Barrow, 142 South Windsor Boulevard, Los Angeles.
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Treasurer, Mrs. Frank R. Makinson, 390 Hampton Road, Piedmont.

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Santa Barbara County—President, Mrs. Wm. B. Hunt, 836 Jimeno Road, Santa Barbara.
Santa Clara County—President, Mrs. Chas. Moore, 173 So. Fifteenth Street, San Jose.
Siskiyou County — President, Mrs. L. J. Seeley, 1824 Grace Avenue, Redding.

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Elbridge Best, San Francisco	(1936-1937)	Robert S. Stone, San Francisco
Lyell C. Kinney, San Diego	(1936-1937)	Harry H. Wilson, Los Angeles
Fred B. Clarke, Long Beach	(1936-1937)	A. J. Scott, Los Angeles
C. A. Dukes, Oakland	(1937-1938)	Edward N. Ewer, Oakland
Edward M. Pallette, Los Angeles	(1937-1938)	W. H. Kiger, Los Angeles
Robert A. Peers, Colfax	(1937-1938)	F. F. Gundrum, Sacramento
William R. Molony, Sr., Los Angeles	(1937-1938)	John C. Ruddock, Los Angeles

Special Committees

Committee on Maternal Welfare

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Lyle G. McNeile	Los Angeles
Ralph J. Thompson	Los Angeles
T. Floyd Bell	Oakland
Hans F. Schluter	Sacramento

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Mast Wolfsohn	Monterey
Paul M. Hunter	Pebble Beach
H. Spencer Hoyt	Pacific Grove
E. F. Kehr	Carmel

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Los Angeles
Morton R. Gibbons, Chairman (for Bay Region), San Francisco
Edward M. Pallette, Chairman (for Southern California), Los Angeles
Junius B. Harris, Chairman (for Remainder of State), Sacramento

Committee on San Diego Exposition Exhibits

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W. W. Roblee	Riverside
Fred B. Clarke	Long Beach
Edward M. Pallette	Los Angeles
John C. Ruddock	Los Angeles
Robert A. Peers	Colfax
Frederick C. Warnshuis	San Francisco

Committee on Tax Supported Hospitals and Medical Care

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T. Henshaw Kelly	San Francisco
E. T. Remmen	Glendale
Axcel E. Anderson	Fresno
Louis A. Packard	Bakersfield
Glenn E. Myers	Los Angeles

Miscellaneous California Medical Organizations

Department of Public Health of the State of California

San Francisco—State Office Building, McAllister and Larkin Streets. UNderhill 8700.
Sacramento—State Office Building, Tenth and L Streets. CApital 2800.
Los Angeles—State Office Building, 217 West First Street. MAdison 1281.
President, Howard Morrow, San Francisco.
Director, Walter M. Dickie, State Building, San Francisco.

California Northern District Medical Society

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Secretary—Dave F. Dozier, 926 J Street, Sacramento.

Board of Medical Examiners of the State of California

San Francisco, Rm. 512, 450 McAllister St.
Los Angeles, 812 Associated Realty Building, 510 West Sixth Street.
Sacramento, 420 State Office Building.
President, William R. Molony, Sr., Los Angeles.
Secretary, C. B. Pinkham, Room 512, 450 McAllister Street, San Francisco.

Southern California Medical Association

President, Franklin R. Nuzum, Cottage Hospital, Santa Barbara.
Secretary, Robert W. Langley, 1002 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

The Public Health League of California

Executive Secretary, Ben H. Read. San Francisco Office, 450 Sutter Street. Los Angeles Office, Room 563, 1151 South Broadway.

Better Health Foundation

President, Reginald Knight Smith, 190 Post Street, San Francisco.
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San Jose, California

CALIFORNIA SANITARIUM
For Treatment of Tuberculosis
Belmont, California

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For the Treatment of Tuberculosis
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For the Treatment of Tuberculosis
Colfax, California

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Nervous and General Diseases
Livermore, California

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For Treatment of Tuberculosis
Los Gatos, California

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For the Treatment of Tuberculosis
Monrovia, California

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The Journal of the California State Medical Association and the Coöperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital, or we will refer your request to the proper department of the A. M. A. for reply.

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Calcium is found in largest amount and in most accessible form in milk. It is essential that all growing children should have one quart of milk a day in some form. Calcium is also found in green, leafy vegetables, but in a lesser amount. Phosphorus, however, is widely distributed. It is found in inexpensive foods such as whole grain cereals, beans and peas; also in lean beef, egg yolk, nuts and cheese.

Vitamin A is found principally in milk and butterfat, yellow root vegetables, egg yolk, and cod-liver oil. Vitamin C is found chiefly in oranges, lemons, grapefruit and tomatoes, fresh or canned. The teeth are the first part of the body to be affected by a shortage of vitamin C. A supply of vitamin D adequate for the growing child is probably not to be had during northern winters without the administration of fish liver oil (cod or halibut) or the equivalent.

The customary American diet of meat, potatoes without the peel, white bread, sugar and starches, and salt, lacks both sufficient vitamin and mineral elements. Milk, milk products and plenty of vegetables and fruit are essential to dental, as well as general bodily health. Finally, one should go to the family dentist twice a year for a check-up.

In sports and elsewhere you will do best by keeping body and mind relaxed. Go as fast as you like, but do not hurry.

CLASSIFIED ADVERTISEMENTS

Rates for these insertions are $4 for fifty words or less; additional words 5 cents each.

COACHING FOR STATE BOARDS—MEDICAL AND Dental. Arthur H. White, M. D., Suite 1005, Flood Building, San Francisco.

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Santa Barbara County Wins Health Award.—In the new Rural Health Conservation Contest sponsored by the United States Chamber of Commerce and the American Public Health Association, Santa Barbara County won first prize in the western division of the United States and honorable mention was attained by Los Angeles County and Santa Clara County.

This contest is limited to counties in districts which have a full-time health service, and 160 such counties or districts were enrolled. The population included in the participating units is between eight and nine million.

For the purpose of the contest the United States is divided into six geographical divisions, three of which are east of the Mississippi River and three west of the Mississippi River.

The contest has as its purpose the elimination of premature deaths and prevention of resultant economic losses, together with those that may be due to unnecessary illness. It aims to accomplish this end by enlisting the active interest of business men in public health and by encouraging a more unified and coördinated program on the part of the several groups or organizations that may be engaged in the protection and promotion of the public health. The items on which participants are scored are similar to those selected for the scoring of cities except that problems peculiar to rural districts are particularly emphasized.

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BOOK REVIEWS

List of Books Received

BOOKS RECEIVED

Principles and Practice of Recreational Therapy for the Mentally Ill. By John Eisele Davis, B. A., M. A., Senior Physical Director, Veterans' Administration, Facility Perry Point, Maryland; Fellow of the American Physical Education Association, in collaboration with Dr. William Rush Dunton, Jr., Editor of "Occupational Therapy and Rehabilitation," Instructor in Psychiatry, the Johns Hopkins University, formerly President of the American Occupational Therapy Association. Cloth. Pp. 206. Price, $3. New York: A. S. Barnes and Company, 1936.

Eye, Ear, Nose and Throat Manual for Nurses. By Roy H. Parkinson, M. D., Head Oculist and Aurist to St. Joseph's Hospital, San Francisco, California. Third edition. Cloth. Pp. 232, illustrated. Price, $2.25. St. Louis: The C. V. Mosby Company, 1936.

Synopsis of Diseases of the Heart and Arteries. By George R. Herrmann, M. D., Ph. D., Professor of Clinical Medicine, University of Texas. Cloth. Pp. 344, with eighty-eight text illustrations and three color plates. Price, $4. St. Louis: The C. V. Mosby Company, 1936.

Exophthalmic Goiter and Its Medical Treatment. By Israel Bram, M. D., Medical Director, Bram Institute for the Treatment of Goiter and other diseases of the ductless glands, Upland, Pa.; formerly instructor in Clinical Medicine, Jefferson Medical College, Philadelphia; member of the Association for the Study of Internal Secretions, etc. Foreword by R. G. Hoskins, Ph. D., M. D., Director of Research, Memorial Foundation for Neuro-Endocrin Research, Harvard Medical School, Boston, Mass. Second edition, completely revised and enlarged, with seventy-nine illustrations. Cloth. Pp. 456. Price, $6. St. Louis: The C. V. Mosby Company, 1936.

Food, Fitness and Figure. By Jacob Buckstein, M. D., Consulting Physician in Diseases of the Stomach and Intestines to United States Veterans' Bureau, Central Islip and Rockaway Beach Hospitals. Visiting Roentgenologist (Alimentary Tract Division), Bellevue Hospital. Formerly Consultant in Gastroenterology to the United States Public Health Service. Introduction by Harlow Brooks, M. D., Emeritus Professor of Clinical Medicine, New York University; Visiting Physician, Bellevue Hospital. Cloth. Pp. 252. Price, $2. New York: Emerson Brooks, Inc., 1936.

Disability Evaluation. Principles of Treatment of Compensable Injuries. By Earl D. McBride, B. S., M. D.,

(Continued on Next Page)

NEW MEDICAL BOOKS

Thomson-Walker: Surgical Diseases and Injuries of Genito-Urinary Organs (New, 2nd Edition)	$10.00
Houston: Art of Treatment	5.00
Power: British Masters of Medicine	3.00
Henderson & Gillespie: Textbook of Psychiatry (New, 4th Edition)	6.00

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BOOKS RECEIVED

(Continued from Preceding Page)

F. A. C. S., Assistant Professor in Orthopedic Surgery, University of Oklahoma School of Medicine; Attending Orthopedic Surgeon to St. Anthony's Hospital; Associate Orthopedic Surgeon to Wesley Hospital; Visiting Surgeon to W. J. Bryan School for Crippled Children; Chief of Staff to Reconstruction Hospital, Oklahoma City, Okla. Art work by Herbert Chezam. Cloth. Pp. 623, with 374 illustrations. Price, $8. Philadelphia: J. B. Lippincott Company, 1936.

Proceedings 1931-1932 Joint Annual Conference of the American Association of Medical Milk Commissions, Inc., and Certified Milk Producers' Association of America, Inc. Mayflower Hotel, Washington, D. C., May 20-21, 1932. Cloth. Pp. 363.

The Eye and Its Diseases. By eighty-two international authorities. Edited by Conrad Berens, M. D., Ophthalmic Surgeon, Pathologist and Director of Research, New York Eye and Ear Infirmary; Special Consulting Ophthalmologist, Woman's Hospital; Consulting Ophthalmologist, Veterans' Administration Facility, New York Lecturer in Ophthalmology, New York Eye and Ear Infirmary; member of American Board of Ophthalmology; member of the Society of Surgeons of Paris; Lieutenant Colonel, M. R. C., U. S. Army. Cloth. Pp. 1,254, with 436 illustrations, some in colors. Price, $12 net. Philadelphia: W. B. Saunders Company, 1936.

Human Genetics and Its Social Import. By S. J. Holmes, Professor of Zoölogy in the University of California. First edition. Cloth. Pp. 414. Price, $3.50. New York: McGraw-Hill Book Company, Inc., 1936.

Treatment in General Practice. The Management of Some Major Medical Disorders. Articles republished from the British Medical Journal. Cloth. Pp. 250. Price, $3.50. New York: Paul B. Hoeber, Inc., 1936.

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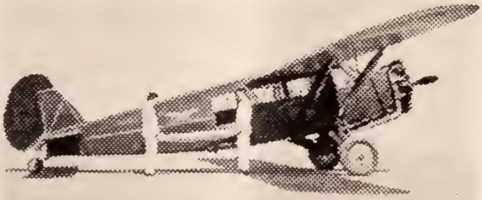

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Amino Acid and Ammonia Metabolism in Liver Diseases. By Esben Kirk. Paper. Pp. 147. Copenhagen: Levin & Munksgaard Publishers, 1936.

The Rockefeller Foundation Annual Report, 1935. Paper. Pp. 479. New York: The Rockefeller Foundation, 1936.

Heart Disease and Tuberculosis. Efforts, Including Methods of Diaphragmatic and Costal Respiration to Lessen Their Prevalence. By S. Adolphus Knopf, M. D., New York University and Paris, New York. This book issued by the patients at the Potts Memorial Hospital for the rehabilitation of the tuberculous. Cloth. Pp. 108. Price, $1.25. New York: The Livingston Press, Livingston, Columbia County, 1936.

BOOK REVIEWS

Synopsis of Diseases of the Heart and Arteries. By George R. Herrmann, M. D., Ph. D., Professor Clinical Medicine, University of Texas. Pp. 344. Price, $4. C. V. Mosby Company, St. Louis.

On the title page the author lists his various special medical organization memberships but apparently thinks so little of his county, state and American Medical Association membership that he omits mentioning them.

The text is a good compendium of the subject for the medical student and general practitioner. It should serve only as a guide and reference to texts giving broader information on each subject.

Food, Fitness and Figure. By Jacob Buckstein, M. D. Pp. 252. Emerson Books, Inc., New York.

Essential, reliable information on the subject. Should be of interest to lay persons and will aid in refuting diet fads.

Eye, Ear, Nose and Throat Manual for Nurses. By Roy H. Parkinson, M. D., St. Joseph's Hospital, San Francisco. Third edition. Pp. 232. Price, $2.25. C. V. Mosby Company, St. Louis.

Just what its title declares. The nurse reflecting the information contained in this manual should become competent. Well arranged, good illustrations and well written.

Exophthalmic Goiter and Its Medical Treatment. By Israel Bram, M. D. Second edition. Pp. 456. Price, $6. C. V. Mosby Company, St. Louis.

The author's leaning is quite predominant throughout the text. No doubt intelligent study, supervision under medical treatment will arrest the symptoms and results of exophthalmic goitre. Persistence in medical treatment has brought irreparable damage. One must employ medical and surgical measures and this text will reveal what constitutes right medical care. However, one must not be misled by the author's success.

Medical Policies and Procedures for the Resident Staff of the Alameda County Hospitals and Clinics. Alameda County, California. By B. W. Black, M. D. Cloth. Pp. 236. Copyrighted.

Having been concerned with the composition and compilation of manuals for guidance of internes, residents and attending staff, this reviewer readily appreciates the value of this particular manual. It is indeed a very comprehensive and complete manual. All recommendations, regulations and procedures are concisely, yet clearly set forth. There is little to doubt or imagine. The entire scope of hospital medical care and treatment is well covered. Important factors are well stressed.

The manual reflects a well organized medical hospital service. It should be most valuable to other hospitals in preparing similar manuals for their institutions.

(Continued on Next Page)

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BOOK REVIEWS

(Continued from Preceding Page)

Essentials of Cosmetology. By H. O. Bames, M. D., Los Angeles. Pp. 98.

A handbook of concise and practical information for all who are interested in the maintenance or enhancement of the healthy appearance of the body.

The text consists of lectures given by the author to classes in public schools.

It should be a useful manual for cosmetologists and will go far in debunking certain claims and statements. Even physicians will do well to become informed upon these essentials and this guide will be found quite helpful.

Minor Surgery. By Frederick Christopher, S. B., M. D., F. A. C. S., Associate Professor of Surgery at the Northwestern University Medical School, Chicago; Chief Surgeon at the Evanston (Ill.) Hospital. With a foreword by Allen B. Kanavel, M. D., F. A. C. S., Professor of Surgery at the Northwestern University Medical School. Third edition, reset. Pp. 1,030, with 709 illustrations. Philadelphia and London: W. B. Saunders Company, 1936. Cloth, $10 net.

Surgery's tremendous and rapid strides deprives a teacher from imparting to medical students during their college and intern years the many practical procedures that experiences develop. The young doctor must acquire them but they must be possessed ere too many years of practice elapse.

This author has compiled these procedures in this text. He is sound and practical as well as thorough in his presentations.

Unreserved endorsement is made. This text should be on the desk of every physician and surgeon. It will be found to be a most dependable guide and consultant.

I shall try to correct errors when shown to be errors, and I shall adopt new views so fast as they shall appear to be true views.—Abraham Lincoln.

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TWENTY-FIVE YEARS AGO

(Continued from Text Page 216)

and before the appearance of albumin in the urine. Second, to show that by proper prophylactic treatment the toxemia may disappear in the large majority of cases, and that the true eclamptic seizure denoting a severe degree of toxemia may be prevented. . . .

From an article on "Arteriosclerosis: Review of Cases" by Donald J. Frick, M. D., Los Angeles.

The cases chosen for review were all private cases that have been watched for periods of from one to five years. The symptoms of each were due to the arteriosclerotic changes or accompanying hypertension; none were accepted that had prominent symptoms due to other conditions. . . .

From an article on "Urology—Past, Present, and Future" by M. Krotoszyner, M. D., San Francisco.

The first meeting of the recently formed Section on Urology of the San Francisco County Medical Society marks an epoch-making event in the history of urology on the Pacific Coast. This occasion—all-important and welcome to those of us whose interests and efforts are bent toward this hitherto neglected branch of scientific medicine—should not be permitted to pass without a few appropriate remarks upon the past, present, and future aspect of urology. . . .

Wisdom consists in knowing what to do. Skill consists in knowing how to do it. Virtue consists in doing.—David Starr Jordan.

When we find the thing for which we are best fitted, work is an unending joy.—Leon J. Richardson.

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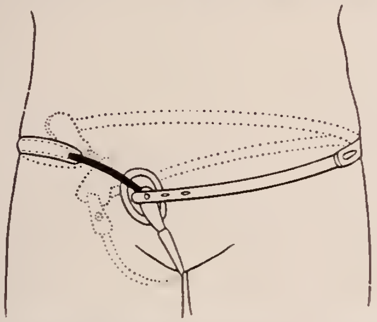

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BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 216)

"Dr. Edward H. Anthony today stood acquitted of a charge that he had issued prescriptions for narcotics illegally. The action was taken in Federal Judge Leon R. Yankwich's * court after a jury which had heard the case several months ago had failed to reach a verdict. Doctor Anthony declared he had issued drug prescriptions only to persons entitled to them under the law and in the course of his duties as a physician." (Los Angeles *Herald and Express*, June 24, 1936.)

"First steps for the return of L. J. Giubbini and Violette Pelegrini from Seattle, to face charges in connection with the state-wide illegal operation ring, were completed today in Sacramento. Governor Frank F. Merriam signed extradition papers for the return of the couple, also known as Mr. and Mrs. Victor Angelo, to San Francisco, according to the International News Service. Indicted by the grand jury along with more than a score of others, the couple are said by police to have fled north." (San Francisco *Call-Bulletin*, June 30, 1936.)

"Dr. S. B. Smith, one of thirty-one persons indicted here as members of a coastwise illegal operation ring, has been arrested in Albany, Oregon, police were notified. Assistant District Attorney John McMahon will go to Albany to arrange extradition, it was announced." (San Francisco *News*, June 24, 1936.)

"Dr. Paul Dorosh, Lindsay chiropractor, has been cited to appear before Judge E. B. Gould this morning at 10 o'clock to answer to a charge of violating Section 15 of

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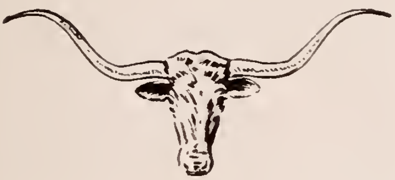
* Decision of Judge Yankwich is printed in this issue.

(Continued on Page 17)



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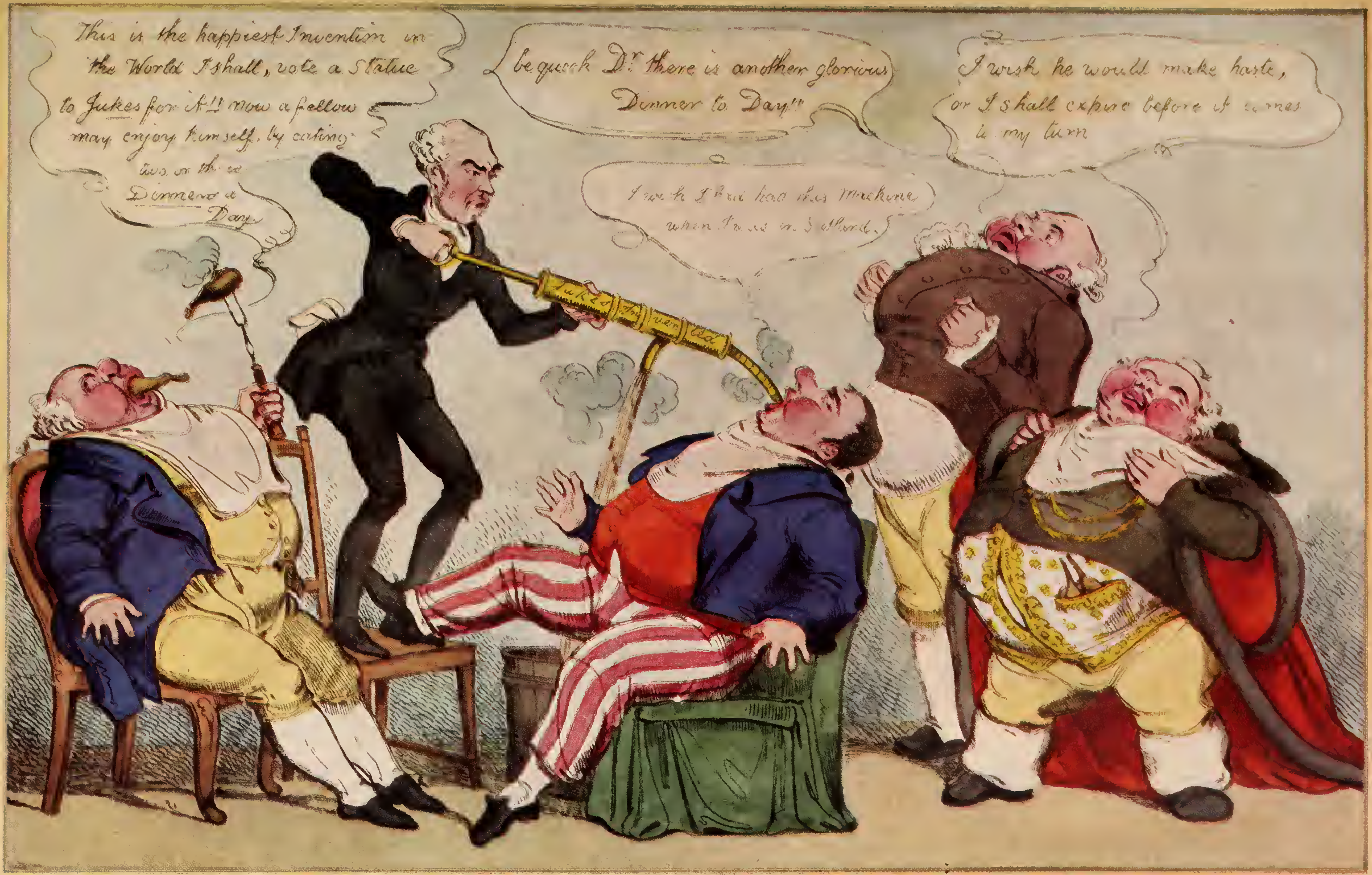
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BOARD OF MEDICAL EXAMINERS

(Continued from Page 15)

the State Chiropractors' Law, which requires the use of the initials 'D. C.' after the name when the title 'Dr.' is used. Doctor Dorosh was arrested yesterday morning on a complaint filed by George E. Swanson, the state inspector." (Lindsay *Gazette*, June 12, 1936.)

"Dr. Jesse C. Ross, 1080 Eddy Street, alleged principal in a coastwide illegal operation ring, surrendered at the city prison yesterday on an indictment charging conspiracy to perform illegal operations. He was released on $2,500 bail. . . . " (San Francisco *Examiner*, July 9, 1936.)

"East Bay police yesterday held Mrs. Amelia Mohr, 52-year-old Alameda widow, for investigation of charges that she performed an illegal operation. She was arrested on information given by Mrs. Clara Gottschalk, 35, of 1850 Eleventh Avenue, Oakland, who lay near death at Alameda County Emergency Hospital. . . . Mrs. Mohr was arrested at her home, 2244 Encinal Avenue, and taken to the office of Assistant District Attorney Charles Wehr." (San Francisco *Examiner*, July 3, 1936.)

"Police and Federal agents today joined in a search for members of a coastwide ring of fake eye doctors, reported to be operating on well-to-do elderly Los Angeles residents. Word that the ring had centered operations in Los Angeles after bilking victims in the State of Washington and other northern sections of thousands of dollars, followed on the heels of the report of a San Fernando couple that they had been defrauded recently." (Hollywood *Citizen-News*, July 7, 1936.)

(Continued on Next Page)

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

"Pleading guilty to violation of the medical practice act, Dr. Grover Talbott, San Jose chiropractor, today paid a $500 fine in Justice Grandin Miller's court. Talbott was accused by Mrs. Rose Toretta of 391 Empire Street, here, of performing an operation upon her last March, which nearly cost her life and left her a cripple. Doctor Talbott paid the fine in preference to a sentence of 100 days in jail." (Press dispatch dated San Jose, July 15, printed San Francisco *Examiner*, July 16, 1936.)

"Information received through a girl operative today resulted in two raids by police on establishments of an alleged abortion ring and the arrest of five women and three men. The places raided were 431 Ashbury Street, where Inspector George Engler said preparations were being made to perform an operation, and 1115 McAllister Street. Arrested and held on charges were Mrs. Minerva Geddes, Mrs. Frances Zoffell, William and Raymond Zoffell, her husband and son; Mrs. Raymond Brandt, Mrs. Gertrude Bergeron, Mr. and Mrs. Walter Swindell. Police said Mrs. Swindell was also known as Leila Geddes, sister of Minerva. The investigation grew out of the death of Mrs. Florence Alves, 38, Redwood City, mother of two children, in a San Francisco hospital, where she was taken for treatment following the illegal operation. . . . Mrs. Geddes, Mrs. Frances Zoffell, Raymond Zoffell and Mrs. Walter Swindell were charged with two felony conspiracies to commit abortion and attempt abortion. . . . " (San Francisco *Call-Bulletin*, July 16, 1936.)

"A jury in Department 40 of the Superior Court yesterday returned a verdict of 'guilty' against Dr. George H. Wymann, 44-year-old physician. The man, on trial for committing an abortive operation on comely Sylvia Carr that resulted in her death last May 11 in the General Hospital, was visibly affected by the jury verdict. Doctor Wymann, who was arrested by Detective Lieutenants Corsini and Clark shortly after the death of the woman, steadfastly denied having committed an illegal operation on the dead woman. Witnesses, however, came forth and told the court that the doctor had treated the woman while she was pregnant. The physician admitted to the arresting officers that he had treated the woman shortly after she was sent to the hospital. General Hospital attaches aided the police inquiry by pointing out that the dead woman had been subject to an abortion. . . . " (Los Angeles *Eagle*, June 26, 1936.) Doctor Wymann's medical license was remoked October 23, 1924, for narcotic dereliction, and restored October 17, 1927, when he was placed on five years' probation.

Pasteurization does not interfere with the food value of milk. It is true that overheating may throw out a small amount of casein and mineral salts, but this is negligible. The only important effect of pasteurization on the food value is the destruction of vitamin C, but since milk originally does not contain enough vitamin C for an adequate supply, tomato juice and orange juice must be given to babies.

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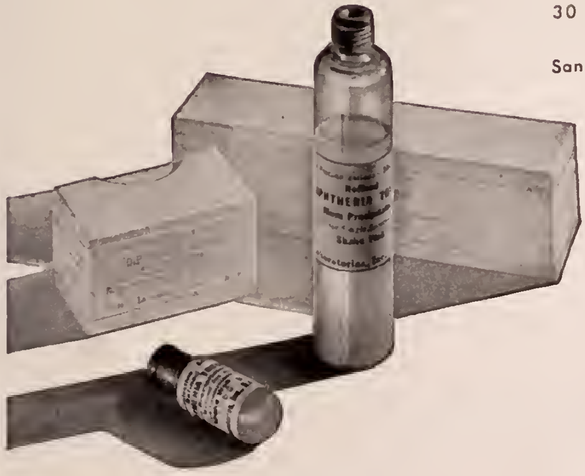

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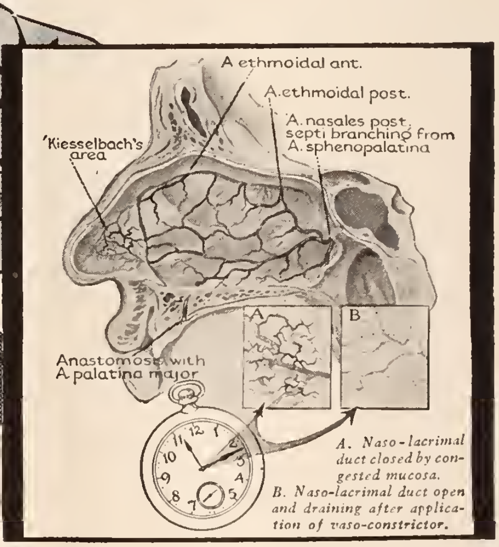
A ethmoidal ant.
A. ethmoidal post.
A. nasales post. septi branching from A. sphenopalatina
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Anastomosis with A. palatina major
A
B
12
1
2
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11

A. Naso-lacrimal duct closed by congested mucosa.
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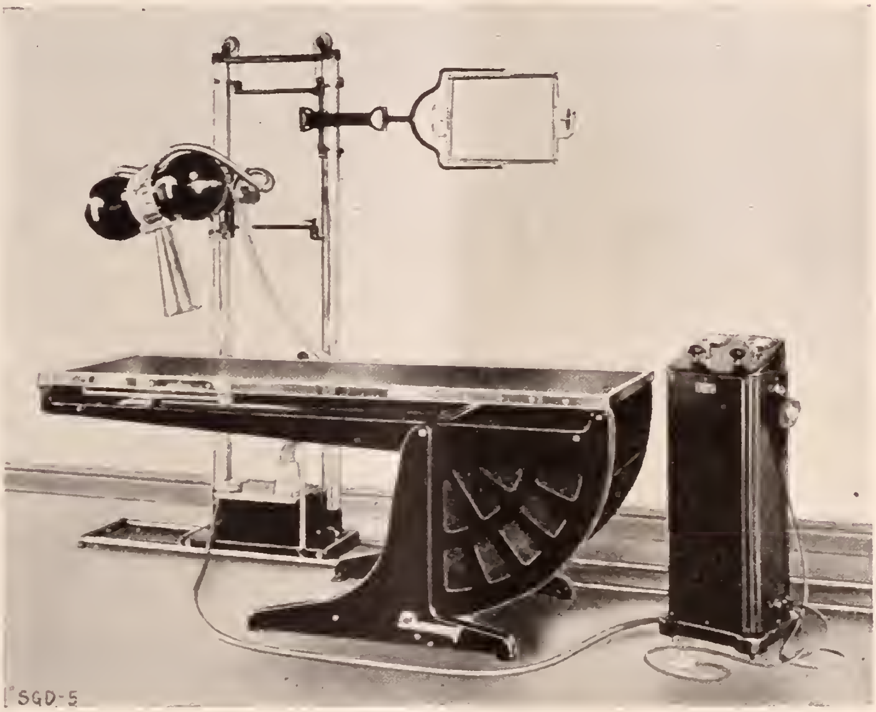

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Government Loses Diabetes Remedy Case.—In a trial at Denver, Colo., last week the Federal Government was defeated in its attempt to prove that Horace Wayne Pierce, manufacturer and shipper of a dried herb medicine called "Diaplex," was guilty of fraud under the criminal clause of the Food and Drugs Act. The herb used by Pierce is known in the semi-arid regions of the West as "salt bush," and to scientists as Atriplex canescens. It was packaged and labeled as a treatment for diabetes, a disease that physicians regard as amenable to control only by insulin and dieting. The acquittal of the defendant resulted, it is believed, because the jury was not convinced of the fraudulent intent, which, under the law, must be shown in all criminal cases involving curative claims for medicines.

Doctors experienced in the treatment of diabetes testified for the government that "Diaplex" could not affect the course of the disease. Their testimony is corroborated, officials state, by the unanimous opinion of medical men in the United States and elsewhere who have studied diabetes and its treatment. The breakdown in the government's testimony came when two of its witnesses—one a doctor—both of whom had used the preparation, admitted on cross-examination that shortly after starting the use of "Diaplex" they wrote to Pierce, the proprietor, in a complimentary and optimistic vein, stating they were pleased with results. At the trial Pierce claimed he depended on those letters as expressions of opinion from persons competent to judge the effects of his treatment. Since one came from a physician who had used the preparation in his hospital, and the other from a woman sufferer from diabetes who used it on herself, the jury concluded that Pierce was not guilty of fraud, despite the testimony of both witnesses that they eventually decided they had been misled, as the herb in fact turned out to be worthless in the treatment of their diabetes.

The Federal Food and Drugs Act prohibits the interstate shipment of a drug product bearing any medicinal claim that is false and fraudulent. The falsity of the claim for treating diabetes made for this medicine was fully proved, the government contends, but the charge of fraudulent intent was not sustained. Physicians appearing for the government said that diabetes varies in severity, some forms being capable of control by mere diet restriction, while others require both dieting and insulin. "The injection of insulin is an unpleasant task," said Dr. M. A. Hodgson, medical officer of the Food and Drug Administration, who attended the trial. "An herb tea is more agreeable and is taken up hopefully by patients who often mistakenly interpret its effects on certain symptoms."

The outcome of the prosecution, it was said at Administration headquarters, does not alter the official stand on such claims as were made for "Diaplex." Action will be brought against all interstate shipments of misbranded remedies, and against their shippers.

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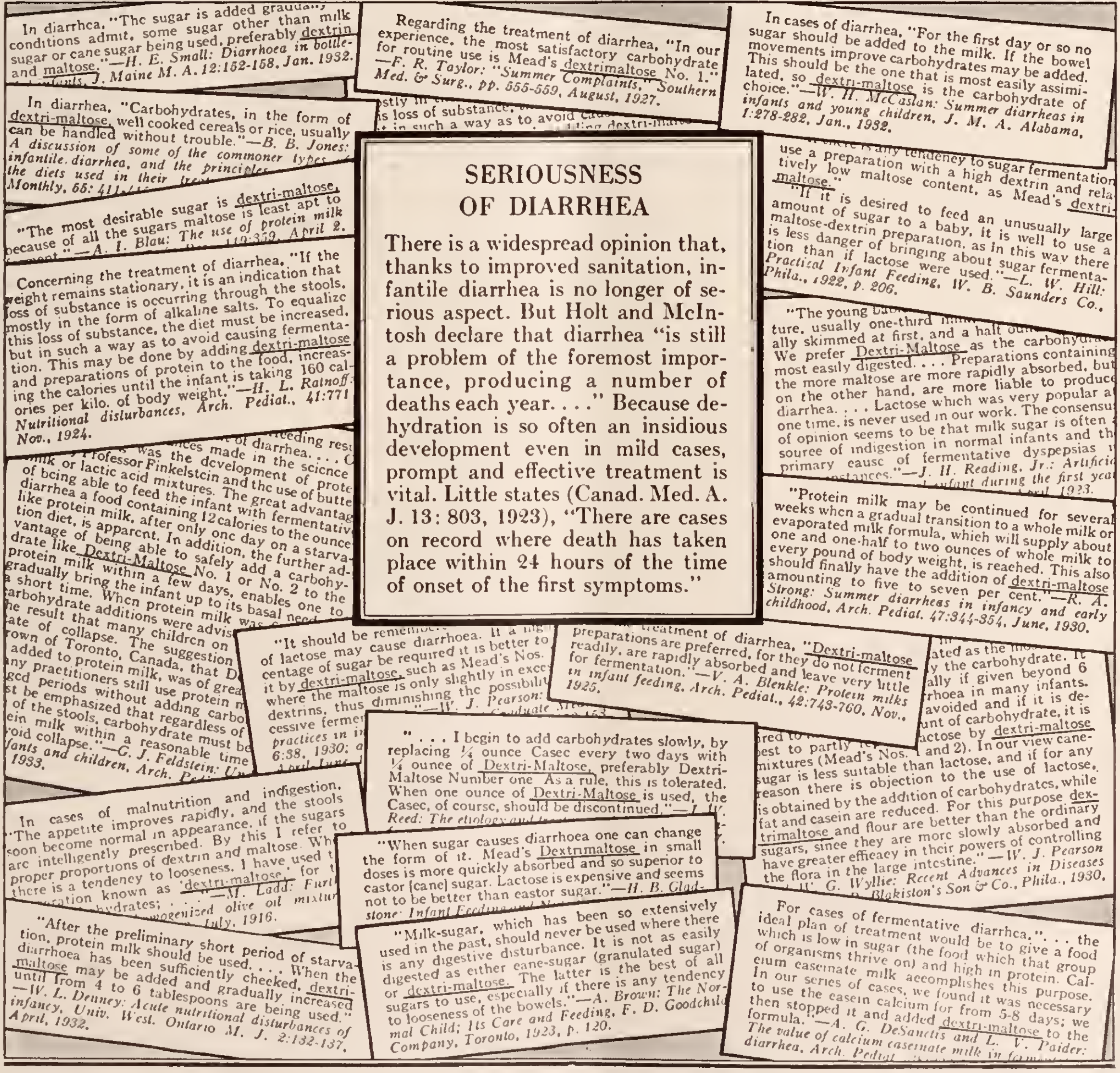
DIARRHEA

"the commonest ailment of infants in the summer months"

(HOLT AND McINTOSH: HOLT'S DISEASES OF INFANCY AND CHILDHOOD, 1933)

One of the outstanding features of DEXTRI-MALTOSE is that it is almost unanimously preferred as the carbohydrate in the management of infantile diarrhea.



In diarrhea, "The sugar is added gradually,
conditions admit, some sugar other than milk
sugar or cane sugar being used, preferably dextrin
and maltose."—*H. E. Small: Diarrhoea in bottle-*
J. Maine M. A. 12:152-158, Jan. 1932.

In diarrhea, "Carbohydrates, in the form of dextri-maltose, well cooked cereals or rice, usually can be handled without trouble."—*B. B. Jones: A discussion of some of the commoner types of infantile diarrhea, and the principles*
the diets used in their
Monthly, 55: 411

"The most desirable sugar is dextri-maltose,
because of all the sugars maltose is least apt to
—*A. I. Blau: The use of protein milk*
April 2.

Concerning the treatment of diarrhea, "If the weight remains stationary, it is an indication that loss of substance is occurring through the stools, mostly in the form of alkaline salts. To equalize this loss of substance, the diet must be increased, but in such a way as to avoid causing fermentation. This may be done by adding dextri-maltose and preparations of protein to the food, increasing the calories until the infant is taking 160 calories per kilo. of body weight."—*H. L. Ratnoff: Nutritional disturbances, Arch. Pediat., 41:771 Nov., 1924.*

of diarrhea. . . .
was the development in the science
Professor Finkelstein and the use of prote
milk or lactic acid mixtures. The great advantag
of being able to feed the infant with fermentativ
diarrhea a food containing 12 calories to the ounce
like protein milk, after only one day on a starva-
tion diet, is apparent. In addition, the further ad-
vantage of being able to safely add a carbohy-
drate like Dextri-Maltose No. 1 or No. 2 to the
protein milk within a few days, enables one to
gradually bring the infant up to its basal need
a short time. When protein milk was
carbohydrate additions were advis
the result that many children on
state of collapse. The suggestion
Brown of Toronto, Canada, that D
added to protein milk, was of grea
many practitioners still use protein m
longed periods without adding carbo
must be emphasized that regardless of
of the stools, carbohydrate must be
protein milk within a reasonable time
avoid collapse."—*G. J. Feldstein:*
infants and children, Arch.
1933.

In cases of malnutrition and indigestion,
"The appetite improves rapidly, and the stools
soon become normal in appearance, if the sugars
are intelligently prescribed. By this I refer to
proper proportions of dextrin and maltose. Wh
there is a tendency to looseness. I have used t
preparation known as 'dextri-maltose,' for
hydrates; . . .—*M. Ladd: Furt*
homogenized olive oil mixtur
July, 1916.

"After the preliminary short period of starvation, protein milk should be used. . . . When the diarrhoea has been sufficiently checked, dextri-maltose may be added and gradually increased until from 4 to 6 tablespoons are being used."—*W. L. Denney: Acute nutritional disturbances of infancy, Univ. West. Ontario M. J. 2:132-137, April, 1932.*

Regarding the treatment of diarrhea, "In our experience, the most satisfactory carbohydrate for routine use is Mead's dextrimaltose No. 1."—*F. R. Taylor: "Summer Complaints," Southern Med. & Surg., pp. 555-559, August, 1927.*

SERIOUSNESS OF DIARRHEA

There is a widespread opinion that, thanks to improved sanitation, infantile diarrhea is no longer of serious aspect. But Holt and McIntosh declare that diarrhea "is still a problem of the foremost importance, producing a number of deaths each year. . . ." Because dehydration is so often an insidious development even in mild cases, prompt and effective treatment is vital. Little states (Canad. Med. A. J. 13: 803, 1923), "There are cases on record where death has taken place within 24 hours of the time of onset of the first symptoms."

"It should be remembered
of lactose may cause diarrhoea. It a
centage of sugar be required it is better to
it by dextri-maltose, such as Mead's Nos.
where the maltose is only slightly in exce
dextrins, thus diminishing the possibilit
cessive fermen
—*W. J. Pearson:*
practices in in
6:38, 1930;

treatment of diarrhea, "Dextri-maltose
preparations are preferred, for they do not ferment
readily, are rapidly absorbed and leave very little
for fermentation."—*V. A. Blenkle: Protein milks*
in infant feeding, Arch. Pediat., 42:743-760, Nov.,
1925.

". . . I begin to add carbohydrates slowly, by replacing ¼ ounce Casec every two days with ¼ ounce of Dextri-Maltose, preferably Dextri-Maltose Number one. As a rule, this is tolerated. When one ounce of Dextri-Maltose is used, the Casec, of course, should be discontinued."—*J. W. Reed: The etiology and*

"When sugar causes diarrhoea one can change the form of it. Mead's Dextrimaltose in small doses is more quickly absorbed and so superior to castor [cane] sugar. Lactose is expensive and seems not to be better than castor sugar."—*H. B. Gladstone: Infant Feeding and*

"Milk-sugar, which has been so extensively used in the past, should never be used where there is any digestive disturbance. It is not as easily digested as either cane-sugar (granulated sugar) or dextri-maltose. The latter is the best of all sugars to use, especially if there is any tendency to looseness of the bowels."—*A. Brown: The Normal Child; Its Care and Feeding, F. D. Goodchild Company, Toronto, 1923, p. 120.*

In cases of diarrhea, "For the first day or so no sugar should be added to the milk. If the bowel movements improve carbohydrates may be added. This should be the one that is most easily assimilated, so dextri-maltose is the carbohydrate of choice."—*W. H. McCaslan: Summer diarrheas in infants and young children, J. M. A. Alabama, 1:278-282, Jan., 1932.*

use a preparation with a high dextrin and rela
tively low maltose content, as Mead's dextri-
maltose."

"If it is desired to feed an unusually large amount of sugar to a baby, it is well to use a maltose-dextrin preparation, as in this way there is less danger of bringing about sugar fermentation than if lactose were used."—*L. W. Hill: Practical Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 206.*

"The young
ture, usually one-third
ally skimmed at first, and a half
We prefer Dextri-Maltose as the carbohydr
most easily digested. . . . Preparations containing
the more maltose are more rapidly absorbed, but
on the other hand, are more liable to produce
diarrhea. . . . Lactose which was very popular a
one time, is never used in our work. The consensu
of opinion seems to be that milk sugar is often
source of indigestion in normal infants and th
primary cause of fermentative dyspepsias
—*J. H. Reading, Jr.: Artifici*
infant during the first yea
1933.

"Protein milk may be continued for several weeks when a gradual transition to a whole milk or evaporated milk formula, which will supply about one and one-half to two ounces of whole milk to every pound of body weight, is reached. This also should finally have the addition of dextri-maltose amounting to five to seven per cent."—*R. A. Strong: Summer diarrheas in infancy and early childhood, Arch. Pediat. 47:344-354, June, 1930.*

ated as the
y the carbohydrate. It
ally if given beyond 6
rhoea in many infants.
avoided and if it is de-
unt of carbohydrate, it is
actose by dextri-maltose
best to partly
and 2). In our view cane-
mixtures (Mead's Nos.
sugar is less suitable than lactose, and if for any
reason there is objection to the use of lactose,
is obtained by the addition of carbohydrates, while
fat and casein are reduced. For this purpose dex-
trimaltose and flour are better than the ordinary
sugars, since they are more slowly absorbed and
have greater efficacy in their powers of controlling
the flora in the large intestine."—*W. J. Pearson*
G. Wyllie: Recent Advances in Diseases
Blakiston's Son & Co., Phila., 1930.

For cases of fermentative diarrhea, ". . . the ideal plan of treatment would be to give a food which is low in sugar (the food which that group of organisms thrive on) and high in protein. Calcium caseinate milk accomplishes this purpose. In our series of cases, we found it was necessary to use the casein calcium for from 5-8 days; we then stopped it and added dextri-maltose to the formula."—*A. G. DeSanctis and L. V. Paider: The value of calcium caseinate milk in*
diarrhea, Arch. Pediat.

Just as DEXTRI-MALTOSE is a *carbohydrate* modifier of choice, so is CASEC (calcium caseinate) an accepted *protein* modifier. Casec is of special value for (1) colic and loose green stools in breast-fed infants, (2) fermentative diarrhea in bottle-fed infants, (3) prematures, (4) marasmus, (5) celiac disease.

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Disinfection and Fumigation.—Disinfection and fumigation constitutes entirely different procedures which are used for entirely different purposes. Most people think of disinfection and fumigation as being identical or at least similar. Generally speaking, fumigation is designed to destroy insects, while disinfection is employed in the destruction of bacteria.

The first public health officer who recognized the inefficiency of fumigation in the destruction of harmful bacteria was Dr. Charles V. Chapin, superintendent of public health at Providence, Rhode Island. To this veteran official public health in the United States is indebted for many advances in the administration of public health, one of which is the removal of the unnecessary procedure of terminal fumigation following a communicable disease.

By no means should it be considered that fumigation is an unnecessary procedure altogether. It is most valuable in cleaning up premises that may be

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infested with insects, but it is of little, if any, value whatsoever in the destruction of agents that may cause infection.

Disinfection deals with the process of destroying the vitality of those minute organisms which may cause disease. In nature there are many forces that are destructive of such agents. Among them are sunlight, dryness, dilution and time. Perhaps the greatest destroyer of germ life is sunlight. Very few organisms can live in direct sunlight for many hours. Dryness is another factor of great importance in the destruction of such organisms. The combination of the two, together with simple cleanliness, constitute the most important attributes in the destruction of bacteria. The old idea that disease organisms are wafted about upon playful breezes is entirely dispelled. It is known that most of the bacteria harmful to man have their sources in man himself and after leaving their host,

(Continued on Next Page)

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★ *Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245*
Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154
N. Y. State Jour. Med., June 1935, Vol. 35, No. 11

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(Continued from Preceding Page)

unless they find favorable conditions for propagation and development, are short lived. For this reason terminal disinfection, which means disinfection after a case of communicable disease has been released from quarantine, has come to be regarded as of much less importance than concurrent disinfection, which means destruction of organisms immediately upon their discharge from their human host. Since man is the source of the infections to which he is heir, the best place to apply disinfection is at the source. Excretions from the nose, mouth and bowels, as well as discharges from wounds and eruptions upon the body surface, need immediate attention. When such procedure is followed there is little need for disinfecting the sick room when the illness has terminated.

Fumigation

Fumigation consists of liberating fumes or gases for the purpose of destroying vermin, insects and small animals which may act as carriers of infection. Fumigation, also, to a very limited extent may destroy bacteria organisms. The gases that are employed in fumigation are very often destructive to human life and extreme care is used in their employment. Fumigation never under any circumstances takes the place of disinfection. Gases always are most efficient in action upon surfaces, lacking power of penetration, and they can not be depended upon to penetrate fabrics or surfaces which may be absorbed in sputum or other discharges in which the disease organisms may be lodged.

In discussing the ideal disinfectant, Dr. M. J. Rosenau in his "Preventive Medicine and Hygiene" states: "The ideal disinfectant must, first and foremost, possess high germicidal power. It must not be rendered ineffective by the presence of organic matter; it must be reasonably stable so as not to deteriorate under ordinary conditions; it must be soluble or readily miscible in water; if it forms an emulsion

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the emulsion should be permanent; it should be harmless to man and the higher animals; it should have the power of penetration; it should not corrode metals, bleach pigment, rot fabric or stain surfaces; and, finally, it should be reasonable in price." He adds further that it requires money and the expenditure of well directed and intelligent energy to accomplish satisfactory disinfection and that no one germicide is applicable to all diseases or to all substances or even to the same disease or the same substance under different conditions.

It will be seen that disinfection requires skill and knowledge and that in order to destroy disease organisms that may be associated with a case of illness the services of an individual who is a skilled disinfector are required. Merely to burn sulphur or other agents in a sickroom following a case of illness is comparable to "burning incense to the unknown gods."

The general public is often misinformed upon the difference between fumigation and disinfection, and health officers are frequently asked for advice upon proper methods of fumigation, when as a matter of fact disinfection is called for and not fumigation. It should be understood that both of the procedures are important in public health administration and neither should be neglected or abandoned. Each has a definite place among those procedures that have to do with the protection of the public health. The problem lies in giving proper information to the average individual so that he may easily understand the difference and the distinction.

Nothing is more important for many people to know than that heart disease does not kill people suddenly as a rule—these instances merely stand out as spectacular examples—most cases respond favorably to moderate living and justify an optimistic outlook on life. Rest, exercise, occupation, diet—all need attention and skilled regulation.

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Violator of Federal Food and Drug Law Fined $4,000; Many Other Fines Assessed.—Shippers of dairy products, fish, nut meats, tomato products, fresh vegetables, macaroni and medicines were brought before the federal courts during June on a variety of charges, the current report of the Food and Drug Administration shows. Fines totaling $6,175 were assessed, with costs added in some instances.

Conspicuous among the cases terminated were those involving the shipment of canned fish found to be partially decomposed. The New England Fish Company, Seattle, Wash.; Klawock Packing Company, Klawock, Alaska; Deep Sea Salmon Company, Skowl Arm, Alaska, and the Wrangell Packing Company, Wrangell, Alaska, pleaded guilty to the shipment of partially decomposed canned salmon, and were fined $10, $10, $10 and $301, respectively. The Sea Pride Packing Corporation, Ltd., Terminal Island, Calif., was fined $200 on account of adulterated canned mackerel, and the French Sardine Company, same location, $500 because of adulterated canned mackerel and tuna. One other case based on the interstate shipment of canned fish (sardines) did not allege decomposition, but the substitution of sesame seed oil for the "pure olive oil" represented on the labels as the packing medium. The defendant, the Hovden Food Products Company, Monterey, Calif., was fined $150.

Ross & Co., Inc., LaBelle, Mo., shippers of cream found to be filthy, were fined $50 and costs in federal court at Hannibal, Mo. The prosecution, based on a shipment made during last year's intensive campaign for clean cream in buttermaking, is the first to terminate in that area. The defendant company had shipped sixty cans of cream, the contents of thirty-one of them being found dirty and decomposed. Through the coöperation of the State of Illinois, into which state the cream was shipped, seizure and destruction of the unfit cream was effected within two days from the time of shipment.

(Continued on Page 34)

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OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION

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Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

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EDITORIALS†

PROPOSED INITIATIVE LAW TO OPEN COUNTY HOSPITALS IN CALIFORNIA TO NON-INDIGENT PATIENTS WILL NOT BE ON THE STATE ELECTION BALLOT IN NOVEMBER

Petitions for the Proposed Initiative Lack the Necessary 186,000 Valid Signatures.—It is good news that current information brings to us,* namely, that the petitions for a proposed initiative law that would open the county hospitals of California to non-indigent patients failed of having the 186,000 valid signatures of voters, necessary to place the measure on the state ballot in November. California's legal requirements for placement of an initiative law on a state election ballot demand that the petition lists, gathered by notary public representatives and properly sworn to, must be filed with county clerks or county registrars of voters prior to July 15; these county officials then having until August 4 to check on the validity of the signatures, which on or before the latter date must be certified to the Secretary of State of California. Present advices indicate that the petitions will not be filed for the 1936 election.

* * *

The Theme and Summary of the Proposed Initiative.—CALIFORNIA AND WESTERN MEDICINE, in its issue for last May, on page 355 set forth the theme of the petitions and gave a summary of the proposed law as prepared by Attorney-General Webb; but for members of the Association who may not have read the same, these articles are here reprinted:

THEME OF PETITIONS

The petitions are addressed to the Secretary of State of California, and read:

> We, the undersigned, registered qualified electors of the State of California, residents of Kern County, present to the Secretary of State this petition and hereby propose an amendment to the Constitution of the State of California by adding Section 21 to Article XI thereof, to read as hereinafter set forth in full, and petition that the same be submitted to the electors of the State of California for

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† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column, which follows.

* See news items from Lodi *News-Sentinel*, and other articles printed in this issue on pages 207 and 211.

their adoption or rejection at the next succeeding general election or as provided by law.

The Attorney-General has summarized the proposed measure as follows:

> Establishment and maintenance of hospitals for pay patients by political subdivision. Initiative constitutional amendment. Authorizes the governing body of any city, county, or city and county, to establish and maintain a hospital for the care and treatment of any resident thereof, whether an indigent or non-indigent, and to enact rules prescribing the rates to be charged each resident, other than indigents, for hospital services and supplies.

* * *

Address of Alfred Siemon, Esq., Guest Speaker at the Coronado Annual Session.—In our comments in the May number, we made only brief mention of this proposed initiative. At the recent Coronado annual session, Alfred Siemon, Esq., of Bakersfield, who led the successful legal battle against the board of supervisors in the Kern County Hospital controversy, was invited, as a guest speaker, to address the House of Delegates on the subject of county hospitals, and in the course of his remarks stated:

"This proposed amendment is rather short, and I shall read it to you in full. As the petitions are being circulated it reads as follows:

> "'The governing body of any city, county, or city and county, is hereby authorized and empowered to establish and maintain therein a hospital or hospitals; to provide rules and regulations for the proper management and appointment of the necessary officers and employees thereof; and said governing bodies shall make rules and regulations governing the admission to and the care, as a patient in said hospital, of any citizen of the United States who is a resident of said county, city, or city and county, whether such persons be indigents or non-indigents, and may in said rules and regulations establish the rates or fees to be charged each non-indigent patient for services rendered and supplies furnished such non-indigent patient in such hospital.'"

* * *

For the Present, California Will Not Go into Private Hospital Business.—A perusal of the above reveals the far-reaching scope of this proposed law, which proponents in Kern and other counties felt certain they would be able to have the citizens of California enact through initiative vote. It is a hopeful sign, therefore, that in their preliminary efforts these propagandists were not successful, and it is our opinion that in the months ahead, before another state election is held in 1938, a full discussion of this contemplated law, which would make the constitutional political subdivisions of California, namely, its counties, engage in hospital business on a pay basis, in competition with the many hospitals that have been brought into being in the past, will result in the development of a strong sentiment among the voters and taxpayers of California, against any such extension of governmental function into a field where there is an imaginary, rather than a real need.

* * *

The Record of the Private Hospitals of California.—One has only to survey the California hospital statistics of recent years, and to consult the audits of income and expenses of hospitals, to be convinced that at the present time, and in most communities, ample hospital facilities exist, and that the charges rendered by these institutions are not out of proportion to the actual costs of the service demanded by patients. These hospitals pay taxes on their properties; their employees receive wages which rarely, if ever, are above the average; their costs for foods and supplies are held down to a minimum, and, be it said further, up to the present time, they have in good faith made it possible for the people of California to secure hospitalization facilities in keeping with the best standards in the United States. This proposed law would blot out most of these institutions through a competition whereby the non-taxed and politically-managed county hospitals would probably undersell the services of these previously-established institutions. In other words, this proposed law would practically make it possible for county boards of supervisors to use public funds to permit a limited number of citizens to buy hospitalization services at less than actual cost, and so engage in competition with private business. If this be permissible, why not then pass laws to permit boards of supervisors to maintain clothing and food establishments that could undersell those commodities, as quoted in the open market, to such citizens who felt they could not pay the prices in stores and shops, or who chose from the standpoint of personal economy, or chiseling, to avail themselves of such a privilege?

* * *

Proponents of the Initiative Seemingly-Blind to the Administrative and Other Difficulties.—Let it be remembered, too, that in all this discussion of hospital costs that has been presented by the proponents of this "county hospitals open to all citizens" measure, the advocates of the plan seem to have had no clear comprehension of the difficulties that would arise in hospital administration through admission and care in the same institution of non-pay (indigent) patients, side by side with whole or part-pay (non-indigent) patients.

Take, for example, the large Los Angeles County Hospital, whose most recent structural addition cost in excess of fifteen million dollars, and which constantly has between 2,400 and 3,000 in-patients. Even under present conditions, the problems which are constantly arising in the care of the several thousand indigent or charity patients are such as tax the best administrative supervision that can be had for that institution. If in that picture of some 3,000 patients, with its large administrative staff, fifty resident physicians, 125 internes, and 500 attending physicians, surgeons and specialists (this last group of attending men giving gratuitous service to the poor), one would bring into the institution through the proposed law, say, 1,000 or more pay patients with their personal physicians, many of whom would be unfamiliar with that hospital's routine, so necessary for efficient service, then it is possible to understand how, in a brief time period, one would have confusion ten times confounded. Think of the turmoil that would undoubtedly be created by pay patients who imagined they were entitled to better service than their indigent fellows! Would the pay patients be content to be cared for in the same wards with the indigents? Would they accept the same foods and service? And what would the board of supervisors do, in case an additional 1,000 pay patients demanded admission, when all beds were already filled? Which of the two types of patients, pay or nonpay, would be given preference under such conditions? Could not such pay citizens who were refused admission go into the courts with demands for damages? Would it then be necessary to build another fifteen-million-dollar unit for these pay or part-pay patients? And after that, then what?

* * *

Civic Obligations of Physicians in the Coming Primary and Final Elections.—One could go on and comment at length on some of the features of the proposed plan to "open county hospitals for all citizens," and emphasize not only the illegality but the impracticability of the entire dream. In good time, it may be necessary to do that very thing. For the present, we are content that the petitions for the new law are lacking in sufficient signatures, and we believe that among those to be congratulated are none other than the proponents of the measure, who evidently do not appreciate what they have been advocating.

On August 4, the newspapers will have informed us whether the petitions have been filed with the Secretary of State. Whether the proponents will use their present propaganda to influence the next California legislature, which will convene in January, 1937, we do not know. That is a something for future consideration. In that connection, however, we should all be alert to our immediate civic responsibilities, both in the primary election in August and, what is of equal importance, in coming to a decision as to what assemblymen and state senators will deserve support in the November elections. No legislator with unsound public health opinions should receive the endorsement of any physician or layman who believes in scientific medicine and proper conservation of the public health. Let us keep that fact in mind, and act accordingly.

DEL MONTE ANNUAL SESSION, MAY 2-5, 1937: PAPERS FOR SCIENTIFIC PROGRAM SHOULD BE STARTED NOW

Essayists for Next Year's Annual Session Should Write to Association Officers.—By the time this issue of California and Western Medicine reaches its readers, the Coronado annual session, the report of which was printed in our April number on page 301, will have been three months behind us, thus leaving only nine months for the preparation, by members of the California Medical Association, of papers that may be in contemplation for next year's annual session. Members having in mind such essays which they desire to submit for consideration by the various sections and the Committee on Scientific Program should communicate as soon as possible with the proper officials.

The roster of section officers is printed in each issue at the top of advertising page 4, and the names of the members of the standing Committee on Scientific Work are given under that heading on advertising page 2. Communications for that committee should be sent to Association Secretary Warnshuis, who is ex officio its chairman.

* * *

Rules Regarding Annual Session Papers Should Also Be Read.—The attention of members is also called to the "Rules Regarding Papers and Discussions at Annual Sessions," which will be found on page 315 of the April number. Observance of the simple and necessary requirements adopted by the Council will aid expeditious publication in California and Western Medicine, and make for the prevention of embarrassing situations that might otherwise arise. Authors should present original copies of their papers to their section secretaries at the time of reading; and section officers, in turn, will save themselves unnecessary correspondence and work in post-convention days by always asking for the original copies immediately after the papers have been read. Compliance with the above suggestions will make annual session programs convenient alike for authors, the section officers and Committee on Scientific Program, and for the Committee on Publications of the official journal.

HARRISON NARCOTIC LAW

Harrison Narcotic Law a Live Topic.—Discussions of the Harrison Narcotic Act in the medical press, from the time that law was enacted by Congress in the year 1914, have covered many, many pages. And rightly so, because repeatedly, in all sections of the country, federal officers, in their zealous efforts to enforce the statute, ofttimes have misconstrued their functions as laid down in the law, and thereby, through improper arrest, have subjected physicians to loss of both money and reputation.

* * *

Complications Arising from Operation of the Los Angeles Municipal Narcotic Clinic.—In Los Angeles several cases have been before the federal courts, in which members of the Los Angeles County Medical Association, who were on the staff of the municipal narcotic clinic—brought into existence and operated as one of the activities of the Los Angeles City Health Department!—were haled before the federal court charged with violation of the Harrison narcotic law.

* * *

Recent Decision of Federal Judge Leon R. Yankwich.—Under date of July 16, one of the physicians, so accused, wrote us the letter printed on page 213. He enclosed a copy of the opinion handed down on June 23, 1936, by U. S. District Judge Leon R. Yankwich.* To this decision, as sent out by the Los Angeles City Health Department, we are giving a place in the original articles department of this issue (so that it may more easily be tabulated in the index of medical literature), the subject being one which should interest all physicians. In connection with this presentation of the federal judge's opinion, it seems pertinent to republish the following editorial which appeared in CALIFORNIA AND WESTERN MEDICINE for January, 1926:

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* See page 164 for full opinion.

NARCOTIC LAWS AND PHYSICIANS

National and state narcotic laws are being enforced with such superlative stupidity that the honest practice of honest scientific medicine by honest, adequately educated physicians is becoming increasingly more hazardous.

Medical opinion is practically unanimous in this conclusion, and what is more important, doctors everywhere are becoming restive under the autocratic rules of tax collectors as to what a doctor may do for his patients. The intelligent element of the voting public is securing some effective but tardy "education" which may in the course of time produce effective results.

Since the decision of the Supreme Court that our chief narcotic law is—as the doctors always have claimed it to be—purely a revenue measure, sane people in all walks of life are waking up to the surprising fact that we are trying to regulate a health problem by money-getting laws administered by money getters for moneyed reasons. People at last are beginning to realize, as one prominent non-medical citizen recently said, that our government is making huge profits out of a vice.

Laws, rules and regulations are now so numerous that an honest, conscientious doctor often must choose between his duty to his patient and the possible consequences of the law. This is to such an extent that many doctors refuse to take chances with tax collectors, undercover agents and what-not, by doing for sick people what scientific medicine endorses as the best treatment. Few doctors can carry in their minds the numerous things laws and painfully numerous bureaucratic regulations require of them every time they give or prescribe a dose of narcotic drugs.

One of the most illuminating analyses and digests we have seen of the Federal narcotic laws has been recently published—with their endorsement—by the Los Angeles County Medical Association. Every doctor ought to have a copy of this 45-page booklet on his desk, and he ought to study it. In order to pay part of the expense of publication, a price of 25 cents is charged, and the book may be obtained from the Los Angeles Medical Association.

* * *

It is suggested that members of the California Medical Association take the time to scan the opinion handed down by Judge Yankwich, because he clearly outlines legal limitations of this revenue measure. On the other hand, members of the Association are strongly advised to be meticulously careful in all diagnosis and treatment in which narcotic medication may be indicated, and especially so in the care of narcotic addicts.

FEDERAL SOCIAL SECURITY PROGRAM: SOME INTERESTING FACTS

For readers who may be interested in some of the facts and figures of the Federal Social Security Program, we have made the following compilation:

A Social Security survey was instituted in June, 1934.

Congress authorized the Social Security Program through a congressional act, dated August 14, 1935.

The Social Security Program operates under ten different titles or subdivisions.

The administration of the Social Security Program consists of two major parts:

One, a group of operating or line bureaus; and

Two, an administrative unit (comprising offices of the general counsel, bureaus of research and statistics, accounts and audits, public improvement and informational service).

The operating or line bureau comprising:

The Bureau of Old Age Benefits,

The Bureau of Public Assistance (which in turn includes state grants to needy aged, state grants to dependent children, and also state grants to the blind).

* * *

Congressional appropriations to carry out the immediate needs of the Social Security Act are:

For the fiscal year ending June 30, 1936, the sum of $42,500,000 was expended.

Available at the beginning of the present fiscal year (July 1, 1936) the sum of $475,253,410.

* * *

The Social Security Program provides funds for two types of activities: First, federal activities, pure and simple; and

Second, federal-state activities (the latter implying a coöperation of federal and state appropriations, through federal grants or allocations to states, given, however, only when certain requirements have been fulfilled).

* * *

Two of the Major Federal Plans:

1. *Federal Old Age Benefit System.* Pension or retirement system to persons past age 65, not engaged in gainful employment. This division will start payments in January, 1942, from funds collected as federal taxes in equal amounts from employers and employees. The taxation will start in 1937 at 1 per cent, in 1938 it will be 2 per cent, while in 1939 and thereafter the tax will be 3 per cent. The estimated income for 1935 is $568,400,000. In this program, farm-laborers and domestics are not included. It has been estimated that the federal old age benefit fund in forty years will have to its credit 50 billions of dollars!

2. *Federal Unemployment Compensation.* Here also a separate federal tax will be levied on all employers who employ eight or more persons. Employers will be taxed 1 per cent in 1936, 2 per cent in 1937 and 3 per cent in 1938 and thereafter. The estimated income for this fund in 1936 is $177,000,000, and for 1938, the sum of $530,000,000.

* * *

Federal-State Allocations:

The $187,000,000 allocated to the Social Security Bureau for specific activities during the present fiscal year is subdivided as follows:

(*a*) Federal grants to states for assistance to the needy aged, the sum of $85,000,000.

(*b*) Federal grants to states for aid to dependent children, the sum of $35,000,000.

(*c*) Federal grants to states to help the blind, the sum of $8,000,000.

Federal grants to states in many instances must be met dollar for dollar from state funds. (It is of interest to note that while the federal moneys must be handled through a state board, in nearly all instances a "lay advisory committee" is required, to supposedly aid in the distribution of the funds!)

The Federal Government, in making its grants or allocations of federal funds to California, will deal through the State Department of Public Welfare and the State Board of Public Health.

* * *

Federal Grants to States for Public Health Work:

A total of $8,000,000 has been set aside in the United States Treasury Department for allocations to states in aid of public health work, and an additional $1,320,000 has been set aside for public health research.

In such allocations or allotments, 57½ per cent of the federal appropriation must be met, dollar for dollar, by the respective states. Another 22½ per cent for aid in special health problems must also be matched by states, dollar for dollar. The remaining 20 per cent can be granted to states, as in the judgment of Public Health Service may be deemed best, it not being necessary to match dollar for dollar in funds from this last 20 per cent.

* * *

The Children's Bureau of the United States Department of Labor has had allocated to it for the present fiscal year $6,469,000, subdivided as follows:

Maternal and child-health services, the sum of $2,820,000;

For aid to crippled children, the sum of $2,150,000;

For child welfare services, the sum of $1,200,000.

The allotments for maternal and child-health services, and for aid to crippled children must be met dollar for dollar by the states, but the allocations for child welfare work need not be so matched.

* * *

We give the above figures in the form presented, because these activities are closely related to conditions having an intimate connection with medical practice. Members of the medical profession, therefore, should be somewhat familiar with these facts because of their possible ultimate influence on medical practice in the days to come.

RATIONAL OR NON-SECTARIAN MEDICINE: DR. WIDNEY'S ANALYSIS OF SECTARIAN MEDICINE, MADE FIFTY YEARS AGO, STILL APPLIES IN CALIFORNIA

Despite the Advances in Scientific and Rational Medicine, Sectarian Healing Art Groups Have Increased During the Last Half Century.—In the April and May issues* of California and Western Medicine appeared a sketch of exceptional interest outlining the life and accomplishments of Dr. Joseph P. Widney, founder of the Los Angeles County Medical Association; and to add to this valuable chapter in biography, in the June and July numbers was printed an address on "Rational or Liberal Medicine" which he gave some fifty years ago in Los Angeles. Members of the California Medical Association who failed to read these articles denied themselves a rare intellectual and inspirational treat.

At this time we wish to refer particularly to this paper, on a subject we are more prone nowadays to speak of as "Non-Sectarian Medicine," this latter term probably having come into being because of the increasing number of "schools" or "sects" of the healing art, whose propaganda has been sufficiently well conducted, not only to confuse the minds of the laity, but, in addition, to secure for such sects legal recognition in many states.

* * *

California a State with Multiple Healing Art Boards.—California is one of the commonwealths that is afflicted with such multiple healing-art boards, for in California we have a Medical Board, an Osteopathic Board and a Chiropractic Board. These two groups of healing-art sectarians were not only successful in securing initiative laws to establish their separate boards—equivalent to constitutional amendments—but the osteopathic group even went farther, by incorporating a flexibility to their initiative act, making it possible to secure, through legislative amendments to our own medical practice act, changes especially applicable to themselves! The chiropractors, being less alert, now have what might be called an initiative law so frozen that, whether they do or not desire it, they must recognize the graduates of all incorporated chiropractic schools, no matter how lax the standards in some of their teaching institutions may be!

* * *

How One of the Initiatives Prevents Desirable Amendments to the Medical Practice Act.—The osteopathic provisions which make it possible for that sect to secure changes by amendments to the state medical practice act would permit that group to raise its legal scholastic standards if it so wished. Unfortunately, it also permits that sect to interpose and object to amendments designed to promote or advance the standards for medical graduates; as witness, for example, our experience of several years ago, when an amendment we submitted to the legislature making obligatory a year of interneship as a preliminary requirement to taking the medical board examination failed of passage. On that occasion, the osteopathic group was able to influence a sufficient number of assemblymen and senators to prevent us from securing this much-desired amendment to our own medical practice act! Strange as it may seem, that is the fact!

In California, therefore, we have, first, a medical practice law, enacted by the state legislature; second, a chiropractic law passed by initiative vote of the people, and so frozen in part that only by initiative vote of the citizens can it be amended—a process so expensive as to almost be prohibitive; and, third, an osteopathic practice act also brought into being by initiative vote of the people, but containing a clever provision permitting it to be amended as to standards, through amendments of our own medical practice act which, as already pointed out, may make it difficult for physicians and surgeons to secure amendments applicable to their own schools and graduates unless the same be also acceptable to the osteopaths!

* * *

Printed Announcements of Sectarian Healing Art Schools.—It is not our purpose here to discuss the curricula of the various sectarian healing art schools. These, insofar as printed catalogue expression is concerned, are usually gloriously outlined in announcements, with generous allocations of "hours" to all subjects, from which it is necessary, if one would be properly oriented, to read not only the lines, but between, and also, to confirm mere impressions by personal investigation of the physical and scholastic equipments of the institutions, in order to prove whether these are in harmony with the printed statements.

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* April issue, page 292; May, page 396; June, page 513, and July, page 58.

* * *

Doctor Widney's Able Analysis of Non-Sectarian and Sectarian Medicine. — Which brings us back to our initial reference to Doctor Widney's address of half-century ago, wherein he so ably stated the cause of Rational or Liberal (Non-Sectarian) Medicine, at a time when the homeopathic and eclectic schools were the only prominent exponents of sectarian medicine. From Doctor Widney's paper we quote and commend for perusal the following illuminating paragraphs, as true today as when they were spoken some five decades ago:

RELATION OF RATIONAL OR LIBERAL MEDICINE TO THE VARIOUS SCHOOLS OF MEDICINE

By bearing in mind what rational or liberal medicine is aiming at in its own development, it is easy to infer what must be its relationship toward the various schools, or systems of medicine, which from time to time spring up. It is itself aiming at freedom from dogmas, for these inevitably lead, as it has too often discovered in its own history, to narrow and one-sided generalization.

It has in all these ages of seeking after truth so often felt the evil of such things that it has learned to beware of them. It therefore says to schools or systems basing themselves upon fixed dogmas:

These things belong to the past: modern science has grown beyond them. Such dogmas imply narrowness. It is a step back toward the dark ages again. Only the broadest freedom of investigation should be recognized in scientific research. Because you have thus abandoned the broader field, and have restricted your research to the narrow limits of a fixed and unchangeable creed, we can not accord to you full recognition as broad and progressive members of a liberal profession. Science knows no boundary lines of creeds; and in the ranks of scientists the days for shibboleths have gone by. It is *because* you have abandoned the broader field of rational medicine, and *because* you are hydropathic physicians, or eclectic physicians, or homeopathic physicians—men whose science is bound up by a preconceived and inflexible theory, and because you are not simply *physicians*, men free to seek for, and to use, truth wherever found, that you are not accorded recognition as worthy representatives of a liberal and rational medicine. It is because you load yourselves down with clogs in the shape of *pathies*, and tie the load on by a distinctive name. Liberal medicine refuses to so encumber itself with clogs: ties itself to no set theories: binds itself by no name distinctive of a fixed creed: and so has to unload itself of no fixed burden of clogs when it would advance.

To the individual members of these schools Liberal Medicine says: Recognition is not withheld from you because you, as individuals, hold some theories of disease and of treatment which we consider narrow and ill-founded, for many individual men within the ranks of liberal medicine hold opinions probably deemed by their fellows equally odd, and yet are simply looked upon with a lenient smile as men who have some queer fancies; but it is because you elevate the fancy into a dogma, and build thereon a sect, and tie yourselves to it, making it a restrictive creed for education, and a test of standing. It is not because you, as individuals, are considered to hold only a partial truth, for many within the ranks of regular medicine fail to grasp the breadth of its teachings, and all their days are only as lame men in the pathway, but because you insist that this is all of truth and restrict yourselves to it.

Liberal medicine has tenets and treatments which resemble from one point of view homeopathy, others which resemble hydropathy; but it recognizes the fact that these are only partial and incomplete views, and are not all, but that more lies beyond. It lifts its eyes from the single hills toward the eternal highlands which it knows must tower through the mists above and afar. It may as yet catch only partial glimpses of that higher ground of medical science, but it feels that somewhere, on through the mists, it lies; and will be content with no resting place that is short of that goal. And it may be that the limits placed upon human knowledge by human weakness make the goal an unattainable one. Still it will climb the higher by being content with nothing less.

Another reason why the profession of liberal medicine has declined to accord recognition to these various schools and systems, is the character of the educational work which they permit within their ranks.

The constant struggle of rational medicine is to raise the standard of education. Under this endeavor the standard has been raised, as has already been stated, from the old-time country reading and a certificate, or possibly a single course of lectures, to a three years' graded course, with clinical work in the hospitals, and rigid examinations. And the tendency is toward a still higher standard. It is not unfair to say that this effort to raise the standard of education upon the part of liberal medicine has not been met by a corresponding effort among the schools or systems enumerated. While there have been some honorable exceptions, the general standard has been low, and without a well-expressed desire or intention of a change. It is no unfair or unjust rule which rational medicine applies to these schools, for it applies the same test to itself. The so-called college of rational medicine which does not conform to the requirements of the higher education, or which lowers its grade, at once loses caste, and is refused recognition. And this is the point in which those of the schools in these systems, which attempt the higher education, fail of reaping the just fruits of their more honorable work. For instead of declining to recognize the colleges which cling to the inferior standard of education, they continue to recognize them as legitimate institutions of learning, and admit their defectively educated graduates to an equal standing with their own who have honestly done better work. In this way they practically neutralize the effect of their efforts to elevate the standard of their colleges. . . .

AND THE QUESTION OF SCHOOLS? OF DOGMAS? OF THEORIES?—WHAT OF THESE?

Time will settle these: time, and more knowledge. As I have already said, one of the merits of rational medicine of today is, that it has learned to beware of positive dogmas and theories, and the schools which are based exclusively upon them. It has found that they are short-lived, and die out; for they are based not upon science, but upon one view of science. Then, if that view proves to be narrow, or mistaken, or false, there is nothing left, and of course they die. It has felt in its own history the evil of these things, and how they may become a clog and a bar to progress. It has learned that even today, with all the great advance which has been made in the accumulation and classification of facts, the stock is not yet sufficient for final generalization; and so has learned to work and to wait. In so varied a field, with a causation so varied, will a single general theory of disease, its causation and its management, ever be possible? It may be doubted. It certainly is not as yet. And so rational medicine, grown wiser than of old, aims to waste no time, no labor, upon problems which are as yet of necessity unsolvable. Instead, its aim now is to delve yet more deeply into the facts, and to push ever higher the standard of medical eduction. It feels that by this road, and by this road only, is the way to the higher truth. . . .

And the time will come, in that newer day, upon that higher plane of science, when schools will drop away; and no one shall say "I am of Paul, and I of Apollos," but the science of medicine shall be one: the doctor shall become doctissimus, and he shall be only a *physician*, a healer of men.

CONSTITUTION AND BY-LAWS OF THE CALIFORNIA MEDICAL ASSOCIATION: A NEW AND REVISED EDITION

At Coronado, the Council instructed the Secretary and Editor to prepare a revised edition of the Constitution and By-Laws; and to incorporate therein the amendments adopted since the San

Diego annual session of 1929, at which time the present-day rules, after considerable discussion at four previous annual sessions, were unanimously adopted. For the purpose of permanent record this revised edition is printed on page 184 of this number of CALIFORNIA AND WESTERN MEDICINE.

Reprints, however, will be made and a copy sent to every member of the California Medical Association, space being reserved in which additional amendments may be inserted. In this revised edition, key numbers are used in those sections that have been amended. These key numbers can be continued and used also for amendments that may be adopted in the coming years, thus making possible an up-to-date edition for all who wish such. Members may well take the time to glance over the text of the Constitution and By-Laws of the Association, because the code as it now exists outlines a system of government that is both representative and centralized and yet elastic and responsive to the will of the organization.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 179.

EDITORIAL COMMENT†

RETICULOCYTES: THEIR COLOR, VOLUME, AND SATURATION INDICES*

While examining the literature on the changes in the red blood cells during the course of various types of anemias, it became apparent that if the changes in these measurements were correlated not only with the condition of the subject, but also with an index of immaturity of the blood, we could obtain further information on the characteristics of the immature red cell. The volume, color, and saturation indices, as of Haden,[1,2] (a relative measure of the volume of the red cells, of the amount and of the concentration of hemoglobin in the cells) have been employed extensively in the clinical diagnosis of the various types of anemias. They have also been used in measuring the changes in the characteristics of the red cell during anemia in experimental animals. Several authors have published data on these measurements, and at the same time have given reticulocyte or differential red-cell count. Although the crude data are given, the authors have not analyzed them with respect to the relation between the blood picture and the above cell characteristics.

In order that we may study the changes taking place in the red cell during maturation, it would seem advisable to correlate the characteristic of a blood sample with an index of immaturity of that sample. The per cent reticulocytes, per cent basophils, or other types of count for immature red cells, may be taken as an index of immaturity of a blood sample.

Using the data submitted by Kindred and Corey[3] (Table 2) and Smith[4] (Table 2) on rats, and Camero and Krumbhaar[5] (Table 2) on dogs, the coefficients of correlation between an index of immaturity of the cell sample and the characteristic of the red cells in question have been calculated. Other authors have published the same type of data, but the numbers involved were not adequate to be analyzed in this manner.

The coefficients of correlation and their probable errors are as follows:

Color index versus per cent eosinophil red cells (Kindred and Corey[3]), — .470, ± .055.

Color index versus per cent reticulocytes (Smith[4]), + .816, ± .033.

Color index versus per cent reticulocytes (Camero and Krumbhaar[5]), + .348, ± .062.

Volume index versus per cent reticulocytes (Camero and Krumbhaar[5]), + .350, ± .066.

Mean diameter versus per cent reticulocytes (Smith[4]), + .792, ± .037.

Saturation index versus per cent reticulocytes (Camero and Krumbhaar[5]), — .451, ± .067.

These coefficients of correlation are all significant and indicate that:

1. The amount of hemoglobin which is contained in the mammalian red cell (rat and dog) is greater in samples of blood containing higher proportions of immature red cells. This in turn indicates that, as the red cell becomes more mature, the actual amount of hemoglobin contained in it becomes less. Three separate sets of data are presented to support this thesis. Two of them are based on the reticulocyte count, while the third is based on the eosinophil red-cell count.

2. The mean volume and diameter of the red cell are larger in the blood samples containing a higher proportion of immature cells than in samples containing a low proportion of immature cells. Hence the immature red cell found in the circulation is larger than the mature cell and gradually decreases in size.

3. The concentration of the hemoglobin in the red cell increases as the per cent of reticulocytes decreases, indicating that the concentration of the hemoglobin in the maturing red cell increases even though the total amount decreases.

College of Agriculture,
University of California.

BEN R. BURMESTER,
Berkeley.

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† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

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[1] Haden, R. L.: J. A. M. A., 83:671-674, 1924.

[2] Haden, R. L.: Folia Haemotol., 31:113, 1925.

[3] Kindred, J. E., and Corey, E. C.: Physiol. Zoöl., 4:294-301, 1931.

[4] Smith, C.: Jour. Path. and Bact., 35:717-726, 1932.

[5] Camero, A. R., and Krumbhaar, E. B.: Amer. Jour. Physiol., 103:407-416, 1932.

ORIGINAL ARTICLES

COLLAPSE THERAPY IN PULMONARY TUBERCULOSIS*

By J. J. Singer, M.D.
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Tuberculosis of the lungs is still one of the most common causes of death, especially between the ages of twenty and forty. These years are the most productive and creative periods in our lives, and therefore even greater efforts should be made to lessen this terrible toll.

Until rather recently the best known method in treating pulmonary tuberculosis has been rest, either at home or sanatorium. The problem was whether the patient could afford proper treatment and what would become of his dependents. Many organizations sprang up throughout the country, such as tuberculosis associations, clinics and social service groups, to educate the public by pamphlets, radio talks, lectures, etc. Cities, counties and states soon founded sanatoria to take care of indigent tuberculosis patients and the social group took care of the families.

After a trial of many years of rest under these arrangements, often with the best possible medical care, statistics did not show a materially lower death rate.

Recognizing this situation, attempts to alter these conditions were made by phthisiologists, with the aid of surgical colleagues, newer methods of treatment were tried, and thus compression therapy was born. These methods are as follows:

1. Artificial pneumothorax
2. Internal pneumolysis
3. Oleothorax
4. Phrenicectomy
5. External pneumolysis
6. Apicolysis
7. Partial and complete thoracoplasty

PNEUMOTHORAX

James Carson,[1] of Liverpool, in 1820 first suggested pneumothorax, but no attention was given to the suggestion until Forlanini of Italy and later Murphy of Chicago again suggested pneumothorax treatment in tuberculosis. It was Brauer of Hamburg who really popularized this method.

Clive Rivière stated that pneumothorax treatment was the brightest ray of sunshine in the dark history of tuberculosis. From the beginning of its use, the most dramatic cures were noted; so much so that this form of compression therapy was used widely, but not too well; and as the result of the unsuitable cases, this method was soon in disrepute.

Instruments were developed and with the advent of the use of the manometer to measure pleural pressures, the pneumothorax treatment was put on a scientific basis. Results in tuberculosis changed for the better.

TECHNIQUE OF PNEUMOTHORAX

The technique of performing pneumothorax[2] treatment at the Medical and Surgical Chest Service of the Barnes Hospital, St. Louis, is as follows: The patient is first fluoroscoped in the upright position, and then lying with the affected side up, the skin is swabbed with tincture of iodin and washed off with alcohol. A small sterile sheet, which has a small circular opening in it, is draped over the patient in such a manner that the prepared area of skin can be reached through the opening. With a small needle and a hypodermic syringe, 2 or 3 cubic centimeters of 0.5 per cent novocain are injected into (not under) the skin to produce an elevated white wheal. A stab incision through the skin of the wheal is made with a sharp cataract knife and through that opening a long, fine needle is inserted to inject novocain into the deeper tissues of the chest wall, including the pleura.

When the local anesthesia is completed, a needle about 3½ inches long with a fairly large bore is connected to a sterile rubber tube, which in turn is connected to a sterile glass tube containing sterile cotton. The needle and attachments are connected to the pneumothorax apparatus ready for introduction of air into the pleural cavity. When the needle is in the pleural cavity, the manometer will register varying degrees of negative or positive pressure, depending on the phase of respiration. In most cases under treatment one finds a negative pressure on inspiration varying from —12 to —18, and on expiration of from 0 to —8. One should not begin the introduction of air into the pleural cavity unless the manometer readings show that the needle is in the free pleural space. If one should obtain either no reading at all or evidence of a positive pressure, it is best to find another site, since such findings often indicate that the needle has been inserted into a mass of adhesions rather than into the free pleural cavity.

When a negative pressure is obtained we allow air to enter the pleural cavity, but not more than 200 cubic centimeters at the first injection. The patient is then examined immediately with the fluoroscope in the same position as that used for the injection of the air, because in this position (horizontal, with the affected side uppermost) the pneumothorax is best visualized. If the patient is then placed in the upright position before the fluoroscopic screen, the air in the pneumothorax pocket will now be seen in the upper portion of the chest. In this way one can determine not only if adhesions are present, but also whether they are narrow or broad bands. One can also usually determine easily if the lung is actually partially collapsed or if, instead, it is pushed over somewhat into the other side of the thorax. This condition may exist even in the presence of a negative pleural pressure if the mediastinal partition is sufficiently mobile. Statistics gathered by Rist and many others, including ourselves, follow (Table 1):

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* From the Department of Medicine, Washington University School of Medicine and the Medical and Surgical Chest Service of Barnes Hospital, St. Louis.

Guest-speaker address read before the first general meeting of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

TABLE 1.—*Percentage of Results in 759 Cases of Artificial Pneumothorax (Rist [3])*

		Per Cent	
Healed	51	6.5	
Clinically well, symptom free, working, but still under treatment	336	45.5	52 per cent
Condition unchanged	33	4.0	
Bilateral (alive)	99	13.4	48 per cent
Deceased	240	30.5	
	759	100	100 per cent

Condition of Controls (Adhesions) (Rist)

Able to work	8	8.5	
Living in institutions (unable to work, condition unchanged or worse)	35	37.2	91.4 per cent
Deceased	51	54.2	

The Medical and Surgical Chest Service, Barnes Hospital Statistics:

84 of our cases
13—17 per cent clinically cured
7— 9 per cent still taking pneumothorax
10—13 per cent definitely improved
16—21 per cent moderately improved
12—15 per cent slightly improved
5— 6 per cent not improved
13—17 per cent dead
8—not known

(Other statistics show similar results.)

A NEW SIMPLE PNEUMOTHORAX APPARATUS

I have recently devised a new small pneumothorax apparatus * which weighs approximately five pounds. No fluid is used in any of the parts. It consists essentially of 100 cubic centimeters air reservoir, an air manometer with jewel movements which registers the negative pressure —30 and the positive +30, and a commutator valve. This valve, by suitable movements of the handle, connects with the air reservoir, with the manometer, and with the chest cavity. By means of this apparatus one can permit 100 cubic centimeters of air to enter the pleural cavity at a time, and pleural readings are taken; and then another 100 cubic centimeters of air is injected until the proper manometer readings are obtained. By referring to the photograph of the instrument, one can readily see the simplicity of the machine.

INTERNAL PNEUMOLYSIS

Unfortunately, many cases of tuberculosis are not benefited even by pneumothorax treatment, due in many instances to dense adhesions between the parietal and visceral pleura. Jacobaeus,[1] of Sweden, was the first to sever these adhesions through an instrument called a thoracoscope. The patient is prepared, as for a pneumothorax; and while under twilight sleep anesthesia and local anesthesia, the trocar is introduced into the pneumothorax cavity. The trocar is removed and an electric-lighted tube (thoracoscope) is introduced with proper eyepiece. One can see into the cavity and note whether adhesions are too thick to burn with a cautery. Two methods are used, one puncture or two punctures. The first method is sim-

TABLE 2.—*Intrapleural Pneumolysis. Remote End-results of Operation, 206 Cases*

Result of Operation	No. of Cases	Condition Before Operation				Present Condition					Remarks
				Sputum					Sputum		
		Bed	Amb.	Pos.	Neg.	Bed	Amb.	WK.*	Pos.	Neg.	
Technically and clinically successful	122	100	22	116	6	5	13	104	....	122	Working, 86 per cent.
Technically unsuccessful; clinically successful	16	16	....	16	....	....	8	8	....	16	Working, 50 per cent.
Technically successful; clinically unsuccessful	2	2	....	2	....	....	....	....	....	....	Two dead: One from spont. px. after op. One from hemorrhage opposite lung.
Technically and clinically unsuccessful	66	52	14	66	....	22	8	14	30	14	Twenty-two dead: Twenty-four had other surgical collapse operations, as phrenicotomy, thoracoplasty: Twenty still under pneumothorax.

* WK, Working.

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* The apparatus is made by the Phillip-Drucker Company, St. Louis.

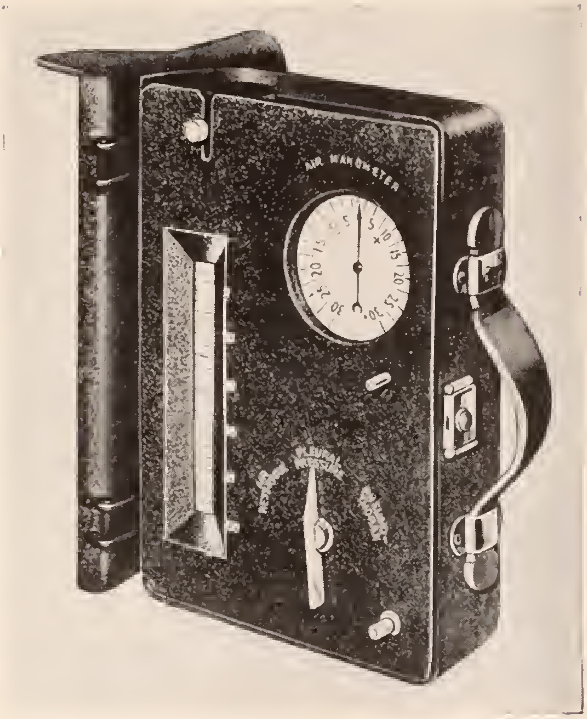

Fig. 1.—The author's new simple portable pneumothorax apparatus. See text for description.

pler, but the field of vision is slightly less than in the latter. At times the single puncture method is not effective on account of the position of the adhesions.

By this method many cavities, which were held open by the adhesions, collapse when they are cut and then ordinary pneumothorax is continued.

This operation, when successful, may save many patients a later thoracoplasty; therefore it is worth while attempting. It requires considerable experience to perform this operation, however, and there are relatively few men as yet who are sufficiently trained to do this.

Ralph Matson[5] reports results with internal pneumolysis as shown in Table 2.

OLEOTHORAX

In 1922 Bernou,[6] of France, proposed the use of massive quantities of antiseptic oil whether mineral or vegetable, in supplanting an unsatisfactory pneumothorax, and has used this method in selected cases and obtained excellent results. Ralph Matson has described oleothorax in several interesting articles.

The antiseptic quality of the oil tends to prevent the formation of empyema, and also obviates the necessity for frequent refills. The oil remains almost indefinitely and it is rarely necessary to aspirate the oil.

The method of administration is not difficult. At the first injection only about three cubic centimeters of the oil is used, with one to ten per cent gomenol, to test the tolerance of the pleura. Later, more oil is injected and the pneumothorax, which was present, is lessened by aspiration of air and replacement by the oil. Later refills and aspiration of air, 200 cubic centimeters at a time, the frequence of refills depends on the reaction.

Ray Matson[7-2] recorded a series of 100 cases subjected to oleothorax treatment during the past seven years, wherein the period of observation was long enough to justify reliable conclusions.

Disinfection oleothorax, alone or combined with an inhibition or compression oleothorax—50 cases. Satisfactory results were obtained in 60 per cent, that is, the empyema was cleared up and the collapse was maintained. The results were unsatisfactory in twenty cases (40 per cent). Causes of failure in these cases were: pleuro-cutaneous fistula, four cases; pleuropulmonary fistula, four cases. The object of the oleothorax—that is, disinfection of the pleural cavity—failed in eight cases. Reformation of the purulent exudate, necessitating abandonment of treatment, occurred in four cases.

Inhibition and compression oleothorax—fifty cases. Satisfactory results were obtained in twenty-five cases (50 per cent). Unsatisfactory results —twenty-five cases (50 per cent). The treatment was temporarily abandoned, but successfully reestablished in fifteen cases (30 per cent). The treatment was permanently abandoned in twenty-five cases (50 per cent). Abandonment of treatment in the above cases was necessitated in twenty cases, because of a persistent exudate formation. In five cases the treatment was abandoned because of severe constitutional reactions.

PHRENICECTOMY

The purpose of the operation on the phrenic nerve is to paralyze the corresponding half of the diaphragm. There can be little doubt that phrenicectomy has failed to justify the expectations of many. It is believed that the procedure has found favor largely because of the simplicity of the operation. Careful analyses of the postoperative results, as reported by men of various countries, have shown that phrenicectomy has a definite place in the treatment of pulmonary tuberculosis. The best results have been obtained when the lesion is in the lower lobe. The pneumothorax is usually attempted first, however, and when this is unsuccessful, then the phrenicectomy operation is considered. Occasionally adhesions prevent a good collapse in pneumothorax; these adhesions also operate to prevent the best results in phrenicectomy. We have noted that, although the diaphragm does not rise high in the chest, the fact that muscles are paralyzed on that side permits compression from the opposite lung to be transmitted through the abdomen upwards on the operated side.

It was first suggested by Sauerbruch[8] that a preliminary phrenicectomy should be performed routinely before every thoracoplasty. He stated that if no reaction followed, such as fever, sweats, and increase of the tuberculous process in the lungs, then the patient could stand a thoracoplasty. In incomplete pneumothorax, a phrenicectomy will keep the lung in better collapse if the diaphragm is paralyzed. Occasionally we have patients who have a reaction following the pneumothorax; and if this continues it has been our custom to do a phrenicectomy on that side and discontinue the pneumothorax treatment. Before completion of the pneumothorax treatment, temporary paralysis (phrenic crush) will keep the collapse of the lung for a period of three to six months. The final cure of tuberculosis by phrenicectomy has been somewhat of a failure. On only 4 per cent of our patients upon whom the procedure was used did we have what we could call a cure.

TECHNIQUE, PHRENIC CRUSHING, PHRENICECTOMY AND PHRENICOTOMY

One may perform either permanent or temporary interruption of the phrenic nerve. Local anesthesia or nitrous-oxide-oxygen may be used. A small sand-bag is usually placed between the shoulder blades and the head is turned sharply to the contra lateral side of the operative site. The incision is made about one inch (three cubic centimeters) above the clavicle, and need not be more than one or two inches in length. After the skin and platysma are divided, the sterno-cleido-mastoid muscle is split longitudinally immediately over the scalenus anticus muscle. The landmark which is constantly sought is the scalenus anticus muscle because this muscle is crossed on its anterior surface by the phrenic nerve from without inward. The phrenic nerve is the only one which follows this course. The nerve is picked up with a hook, and if the operation of exeresis is to be carried out, it is clamped, cut and the lower end twisted out of its bed slowly. In the case of a phrenic exeresis it is usually desirable to obtain twelve to fifteen centimeters of the nerve. One may feel reasonably certain that connections with the accessory phrenic nerve have been broken.

In the case of a simple phrenicectomy, the nerve is merely cut across. For temporary phrenic interruption the usual procedures are simple crushing of the nerve with hemostatic forceps. After crushing, the nerve regenerates with return of function of the diaphragm in from three to six months.

EXTERNAL PNEUMOLYSIS

External pneumolysis is the operation of opening the chest cavity by incision of skin, muscles, and separating the ribs by instruments cutting the pleura and directly severing adhesions, either by cautery or knife, between forceps. This method is not used often, as empyema is a more common complication and thoracoplasty becomes necessary.

EXTRAPLEURAL PNEUMOLYSIS

The term extrapleural pneumolysis implies separation of the lung with its adherent parietal and visceral pleura in toto or in part from the chest wall. The term apicolysis implies separation of the apex of the lung from the chest wall.

Schlange,[9] Sauerbruch,[8] E. A. Graham [10] and others have employed gauze-packs to obtain compression. Rubber balloons have also been employed. Pneumolysis and apicolysis have been performed as independent procedures. When performed at the same time as the thoracoplasty, the results may be more striking, but there is then considerable hazard.

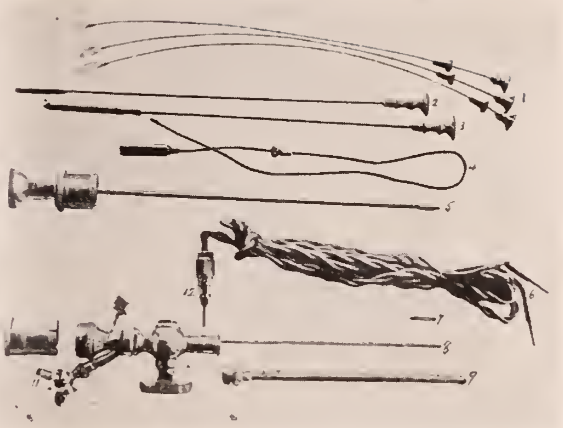

Fig. 2.—Thoracoscope for single puncture operation. (Devised by the author.)

Extrapleural pneumolysis has been carried out through axillary incisions, anterior incision or through a paravertebral incision. Many prefer the anterior approach. The operation requires the resection of a portion of at least one rib. Separation must be done with care and all bleeding controlled. During the separation the pressure is exerted in the direction of the chest wall rather than against the pleura and lung.

PLOMBAGE

Baeir [11] (1913) recommended the use of a mixture which contained a substance opaque to the Roentgen ray. He employed paraffin which had a melting point of 58 degrees Centigrade, in combination with paraffin which had a melting point of 50 degrees Centigrade. He used 75 cubic centimeters of the former and 25 cubic centimeters of the latter. To this mixture he added 1 gram of bismuth carbonate and 0.05 gram of vioform. Nisson [13] prepares the mass for plombage in the following manner: 75 cubic centimeters of paraffin with a melting point of 58 degrees Centigrade are melted with 25 cubic centimeters of paraffin with a melting point of 43 degrees Centigrade to 44 degrees Centigrade. One cubic centimeter of bismuth carbonate and 0.05 cubic centimeters of vioform are added to a small amount of this mixture. A uniform mixture is obtained by stirring for one-half hour and gradually adding the rest of the paraffin to the small mixture which contained the vioform. The mass is then placed in glass vessels with tight covers and is sterilized in a vapor sterilizer on two successive days for one hour on each occasion. The vessels are heated in a water bath and shaken to make the mixture uniform just before using. The liquid is then poured into a sterile porcelain dish and allowed to cool until it is of a homogenous consistency, pale yellow in color, and readily kneadable. From 500 to 600 cubic centimeters of this mixture is safe for most compressions. More than this amount may produce sufficient pressure to erode into the cavity with disastrous results. At body temperature, this paraffin becomes rather firm, and remains so, but occasionally some of the mass breaks off

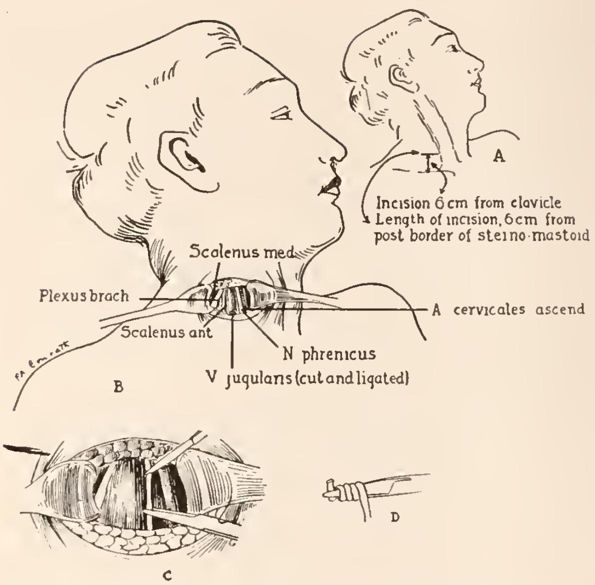
A
Incision 6 cm from clavicle
Length of incision, 6 cm from post border of sterno-mastoid
Scalenus med
Plexus brach
A cervicales ascend
Scalenus ant
N phrenicus
V jugularis (cut and ligated)
B
C
D

Fig. 3.—After John Alexander, Surgery of Pulmonary Tuberculosis; courtesy of Lea & Febiger. *A*, Wilm's transverse incision for phrenicectomy; *B*, surgical approach to the nerve; *C*, the nerve being grasped with a forceps and being cut across; *D*, the method of performing the so-called phrenic exeresis.

and erodes into a bronchus and may produce bronchial pneumonia. This is one of the dangers of plombage.

The advantages of plombage are its simplicity, because it avoids extensive operations, and results are immediate. The method can be used in bilateral lesions in patients who need a thoracoplasty, but who are physically unable to stand this type of operation.

The operation consists of resection of about three centimeters of the third or fourth rib, posteriorly. The finger is inserted through this opening, and with a stripping motion the lung is separated without rupturing the pleura. By referring to the illustration (Fig. 4), one can readily see how the cavity is manually compressed and the space which is made by finger dissection is filled with the prepared paraffin. Baeir, Nisson and Winternitz have all reported excellent results. It has been our custom not to use the paraffin pack if thoracoplasty could be done.

Bilateral involvement does not contraindicate plombage. Extensive cavitation on one side, with no evidence of fibrosis or fixation of the mediastinum, is also an indication if pneumothorax is impossible because of adhesions. Plombage may be used to prepare the mediastinum and to create adhesions, and also to supplement the incomplete collapse of a cavity by thoracoplasty.

Plombage may, of course, be carried out on both sides, since it does not put the entire lung out of function. Complete obliteration of the pleural space is even more necessary for plombage than for thoracoplasty. It is advisable to do a diagnostic pneumothorax before operation in order to determine whether or not the pleural space is free.

The operation consists of resection of about three centimeters of the third or fourth rib, posteriorly, subperiosteally through a paravertebral incision. The pleura and lung are separated from the chest wall in the manner usually employed in carrying out an external pneumolysis. As one might expect, the postoperative reaction is similar to that following any compression therapy, and is in the form of a "tuberculin" reaction. Postoperative fever may be due to the formation of an exudate around the paraffin. The exudate should be aspirated whenever necessary.

Winternitz of Hungary reported excellent results in thirty-six cases, with definite improvement in twenty-eight.

EXTRAPLEURAL THORACOPLASTY

Rest is still of fundamental importance in the treatment of pulmonary tuberculosis. General body rest is no less important than rest of the diseased part. Thoracoplasty contributes to the local rest and is, therefore, not to be considered as a substitute for the general body rest, which must be carried on after thoracoplasty. Those patients who have already demonstrated the ability to help themselves are the ones who are most benefited by this operation, because they have shown a resistance to the disease. The most satisfactory evidence of this natural resistance in most cases is presented by the clinical course of the disease and the Roentgen findings. A displaced trachea to the affected side, narrowed intercostal spaces and elevated diaphragm are all definite evidence of resistance on the part of the patient. Other manifestations of resistance are the absence of active tuberculosis involvement in other regions in the body, and the lack of positive physical signs in the so-called good side. Sometimes the x-ray and physical signs of a naturally collapsed lung due to fibrosis, are misleading. By bronchography,[12] with iodized oil, one can see the true character of the lung cavities, and bronchiectases are noted. These cavities naturally prevent the lung from healing, and thoracoplasty in this type of case frequently permits the cavity to be healed.

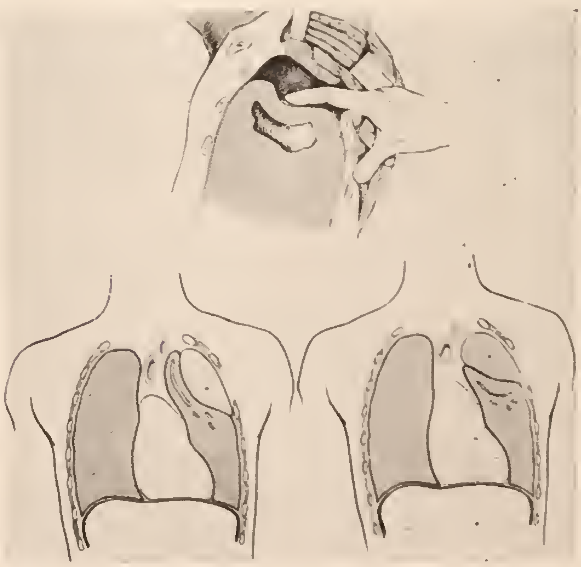

Fig. 4.—Technique and end results following plombage for a tuberculous cavity.

APICAL THORACOPLASTY

A complete thoracoplasty has been used until recently to collapse apical cavities. It was felt that if only the ribs overlying the cavity were removed the result obtained would be unsatisfactory, since the remaining ribs would prevent the desired collapse. We now know, however, that such is not the case, and from our own experience and the experience of others, we are convinced that a partial thoracoplasty in selected subjects is all that is necessary. This partial thoracoplasty sometimes calls for the removal of only four or five ribs. The good results originally obtained have justified the procedure in most instances. A few bilateral apical thoracoplasties have been reported.

COMPLETE THORACOPLASTY

Complete thoracoplasty is done in three or four stages. This multiple operation has reduced the mortality considerably.

Hedblom [13] recently reported on a collected series of 3,762 patients which had been followed for from one to twelve years after operation; 35.3 per cent were symptom and bacillus-free, and were able to work; 22.1 per cent were improved and able to do some work; 5.5 per cent were not improved or were made worse by the operation; 3.5 per cent were not traced; and 33.6 per cent were dead at the time of the report. A large proportion of the patients are rehabilitated to the extent that they are able to return to their former stations in life and to resume their former occupations or activities. Many women marry, and there is record of twenty-two who have borne children since their operation, usually against advice.

In the experience of the Medical and Surgical Chest Service, Barnes Hospital, 140 patients operated upon by Doctors E. A. Graham and Duff Allen, twelve have died within a month after the operation, a mortality of 8.5 per cent. In an analysis of seventy-five cases in which the operation was performed before 1933 it was found that 29.3 per cent of the patients were able to resume normal activities and had no tubercle bacilli in the sputum, and no evidence of remaining cavitation; 28 per cent were classified as moderately to definitely improved (able to resume some part or all of normal activities, but with tubercle bacilli occasionally present); and 17.3 per cent designated as slightly improved (cavities smaller or absent, but sputum still containing tubercle bacilli and patients still unable to work, although improved in general condition). More than 50 per cent of the patients seem clearly to have been benefited by the operation.

Accumulated evidence indicates clearly that if cases are properly selected, the operative mortality of complete thoracoplasty is relatively low and ultimate results gratifying.

The surgical technique of thoracoplasty is not discussed in this paper, because it is described in several books on chest surgery, particularly those by John Alexander,[14] Sauerbruch,[8] and Graham, Singer and Ballon.[2]

IN CONCLUSION

1. Collapse therapy has demonstrated its value in tuberculosis, and has been a great step forward in the battle against this disease, particularly in those who are otherwise doomed to die.

2. The simpler methods, particularly pneumothorax, is the one most extensively used, and should be tried before any of the other major measures are considered.

3. The results indicate that many years of illness and economic loss can be saved by judicious use of the various types of compression therapy.

4. Mortality statistics alone cannot be used as a criteria for the use of collapse therapy.

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REFERENCES

1. Carson, J.: Trans. Royal Med. and Chir. Soc., London, 4:763, 1920.
2. Graham, Singer and Ballon: Surgical Diseases of the Chest, p. 863, Philadelphia: Lea and Febiger, 1935.
3. Rist, E.: Result of Artificial Pneumothorax in Pulmonary Tuberculosis, Am. Rev. Tuberc., 15:294, 1927.
4. Jacobaeus, H. C.: Ueber das Abbrennen der Adherence bei der Pneumothorax-behandlung der Lungentuberkulose, Acta med. Scandinav., Helsingfors Suppl., p. 196, 1922.
5. Matson, R. C.: Intrapleural Pneumolysis by Jacobaeus-Unverricht Method, Nat. Tuberc. A. Tr., 24:171, 1928.
6. Bernou, A.: L'Oleothorax thérapeutique, Bull. Acad. de méd., April, 1922.
7-2. Matson, Ray, Graham, Singer and Ballon: Surgical Diseases of the Chest, p. 974, Philadelphia: Lea and Febiger, 1935.
8. Sauerbruch, F.: Die Chirurgie der Brustorgane, Berlin, Julius Springer, vol. 1, 1920.
9. Schlange: Cited by Baeir, Ztsch. f. Tuberk., 23:209, 1915.
10. Graham, E. A.: Unpublished data.
11. Baeir, G.: Die extrapleurale Plombierung bei Lungentuberkulose, München. med. Wchnschr., 68:1582, 1921.
12. Cabitt, H. L., Singer, J. J., and Graham, E. A.: Bronchography Following Thoracoplasty for Tuberculosis, J. Thoracic Surg., 5:259, 1936.
13. Hedblom, C. A.: Results of Surgical Treatment of Pulmonary Tuberculosis, Am. Rev. Tuberc. (July), 1935.
14. Alexander, J.: Surgery of Pulmonary Tuberculosis, Philadelphia: Lea and Febiger, 1925.

PEDIATRICS: SOME PRESENT DAY TRENDS*

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It is not my purpose today to present a paper on original work, either of a research or clinical nature, but rather to summarize the progress which has been made during the year in the field of prevention of contagious disease, and in the field of endocrinology as it pertains to problems of growth and development. During the past few years a great deal of stress has been placed on various economic factors connected with the practice of pediatrics, so that we have been prone to lose sight of our fundamental duty to our patients, to give them the best that medical science can offer. For this reason it seems well to take stock of some of our accomplishments and shortcomings.

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* Chairman's address, Pediatric Section of the California Medical Association, at the sixty-fifth annual session, Coronado, May 25-28, 1936.

PREVENTION OF CONTAGIOUS DISEASES

I feel that progress has been made in the past year in the attainment of one goal, that of the prevention of contagious diseases. All pediatricians are familiar with the proper procedures from the standpoint of recognized practice. However, we are constantly confronted with evidence which indicates that preventive measures available to us are not being utilized to their fullest extent. This is especially true of active immunization against communicable disease. In spite of repeated educational campaigns of school, health, and county medical society authorities, progress, although gratifying, has not been entirely satisfactory. The medical profession itself, and we pediatricians in particular, are largely at fault. Health departments should not be censured too much for the failure of preventive measures to function. Health departments have been undermanned and underpaid. Their efforts to stimulate the local medical profession into taking over some of their local public health problems have usually been unsuccessful. The result has been that agencies largely controlled by laymen have usurped the job, and are using successful means to increase the scope and degree of encroachment on private medical practice. Misinformation concerning many preventive measures has been disseminated by these agencies whose workers are untrained and ignorant, in so far as medical knowledge is concerned. Many of us have loaned our names to such agencies without being sure that proper medical information was being given.

I should like to summarize briefly, and as accurately as I can, the present status of some of the measures for the prevention of contagious diseases.

DIPHTHERIA

Diphtheria is now a preventable disease, but too often it is not prevented. The reasons are that immunization is not available to all who should have it, that it sometimes is improperly carried out, and that it is sometimes refused. All children should be actively immunized against diphtheria. Children who manifest allergic tendencies should not receive horse serum products, and should be tested for sensitivity to any goat products used. Otherwise there are no exceptions. The ideal age for immunization is six months. Reactions are slight at this age, and protection is assured during the most susceptible years. Children above seven years of age should be tested by the Shick method to determine whether immunization is necessary. If a positive reaction is obtained, a skin test of the material to be used for immunization should be made prior to its administration. The best material available for immunization at the present time seems to be the toxoid prepared by the method of Ramon. From two to three injections at intervals of three weeks should be given. Some still prefer to use the three doses of goat toxin-antitoxin, which is a satisfactory product. Alum toxoid, which is given in one injection, is very resistant to tissue absorption; for this reason it acts as an irritant and not infrequently leads to abscess formation. One of the remaining problems in this field is the perfection of a satisfactory one-dose immunizing agent, and this no doubt will be one of the accomplishments of the near future.

There has been considerable controversy regarding the value of the Shick test. The test can be said to be unnecessary in the case of a child under six years of age; in the cases of children above this age it should be used to determine whether or not active immunization should be given. The test should be used also to determine whether or not immunization has been successful. For this purpose it should be made three months after the injections have been given; if a positive reaction is obtained, an additional dose of toxoid can be administered. Occasionally a child may be immunologically inert or incapable of responding to any antigenic substance. Shick test toxin in peptone is the most practical material, because of its stability, for the average practitioner who tests children individually. If large groups are to be tested, undiluted toxin is probably better. Interpretation of the reaction should be made on the third day; if it is negative at that time, it should be observed again on the seventh day.

SCARLET FEVER

Active immunization against scarlet fever by means of injections of small, gradually-increasing doses of toxin derived from the scarlet fever streptococcus has been advocated. The toxin is administered over a five weeks' period at weekly intervals. This immunization may be of value for nurses, children in orphanages, etc., but it should not be recommended as a general routine preventive procedure. In the first place, the severity of the reaction is frequently greater than that of the disease itself, and in the second place the degree and duration of the immunity conferred is uncertain. The committee of this section and of the American Academy of Pediatrics for consideration of such immunization decided that the material available at the present time is unreliable. The zeal of biological detail men is great, however, and many physicians are attempting this immunization.

TYPHOID FEVER

It has been thought that typhoid fever does not constitute a real menace in the United States except in certain sections where the standard of living is generally lower. Experience in recent outbreaks has shown us that our present method of inoculation does not confer sufficient protection in the presence of especially virulent or overwhelming numbers of typhoid bacteria. It is suggested that typhoid inoculation, repeated every two years, be given to doctors, nurses, children going to summer camps and travelers to the Orient and Europe, but universal administration of typhoid vaccine is not recommended.

WHOOPING COUGH

One of the real problems of infancy and childhood, the solving of which has met with some encouragement of late, is the prevention of whooping cough. For years the seriousness of the disease has stimulated studies in its prevention, but any immunization heretofore attempted has been of no value. Recently much enthusiasm has been aroused by the work of Frawley, Krueger, Sauer, and Madsen, with freshly isolated strains of hemolytic pertussis bacilli. The use of fairly large doses, 8 cubic centimeters, of Sauer's vaccine has in my own hands seemed to be preventive in the majority of children. The proper dosage of vaccine, and the degree and duration of immunity obtained are problems to be solved. We cannot yet say that we have in this vaccine an active immunizing agent as dependable as is diphtheria toxoid, but the results of clinical trials are encouraging. Convalescent serum or adult whole blood has been used with good results as a temporary prophylaxis against pertussis.

SMALLPOX

Smallpox vaccination should not need discussion, but in a state like ours, in which there are constant endemic foci of the disease near by in Mexico, and in which active campaigns against vaccination are waged by large numbers of the population and even by many of our physicians, the disease is a menace. Routine vaccination of all infants between the ages of 6 and 12 months should be the rule, the only precaution being that sufficient time, from three to six months, be allowed to elapse between smallpox vaccination and diphtheria immunization.

ANTERIOR POLIOMYELITIS

Prevention of anterior poliomyelitis has received much attention during the past year, but still remains one of our major unsolved problems. Two vaccines have been advocated by Park and Kolmer, men of high standing in preventive medicine. From evidence available at the present time, however, we are not ready to say that these vaccines may be used routinely or even experimentally without some hazard.

MEASLES

The active immunization of measles remains another unsolved problem. The passive immunization, or modification, by whole blood, convalescent serum and immune globulin (placental) is an accomplished fact, and is being used very extensively with good results.

TETANUS

During the past year a tetanus toxoid has been developed which apparently causes a very rapid rise in antitoxin in persons previously immunized. If it is administered to such patients at the time of injury, a sufficient rise in the antitoxin level is obtained within the incubation period of the disease to protect them against tetanus. This material does not cause the serum reactions so frequently seen following the usual tetanus antitoxin injections. It has no value as a therapeutic agent, however, and should not be used at the time of an injury as a prophylactic agent in a patient who has not been actively immunized previously.

SOME TOXINS, ANTITOXINS AND TOXOIDS

A new meningococcus antitoxin has been advocated and introduced by Ferry. This probably does not differ, contrary to some reports, from other similar products, and should not be used on the assumption that it is a true meningococcus antitoxin. Evidence so far is not convincing on that point.

Staphylococcus toxin, antitoxin and toxoid have been subjects of a great deal of discussion. Toxoid is apparently a useful agent in the treatment of chronic staphylococcus skin infections, but it does not seem to be specific. There is no convincing evidence that this product is of any value in infections other than chronic pyodermias. Staphylococcus antitoxin seems to relieve certain symptoms in septicemia and occasionally appears to prevent early death. No definite bactericidal action has been proved in subacute or chronic pyemia and osteomyelitis.

BRONCHOPNEUMONIA

Although the management of bronchopneumonia should perhaps not be included among communicable diseases preventable by immunization, I should like to mention here one weapon at our command which I have found very helpful in the control of this disease. I refer to transfusions of whole blood. Specific curative agents of many kinds have been advocated by various observers, but except for Type I pneumococcus serum, which is not used as generally as it should be, their use constitutes a hope rather than a cure. Transfusions in cases of pneumonia, instead of being hazardous procedures, are almost invaribly beneficial; and there need be no fear of embarrassing the circulation even in those cases in which the situation is grave from the onset. Frequently transfusion is followed by a drop in temperature and marked general improvement. Such improvement may not seem to be maintained, but in the case of the very ill infant it may be sufficient to throw the balance to the side of recovery. In infants, intraperitoneal transfusion of 200 cubic centimeters of whole, properly cross-matched blood may be used. In older children the direct method may be employed, using a local anesthetic for cutting down on the veins if necessary. I have found that the adoption of transfusions as a part of the routine treatment for severe bronchopneumonia will frequently save lives and almost invariably shorten the duration of the illness. Even repeated intramuscular injections of from 40 to 50 cubic centimeters of whole blood, at two or three-day intervals, will be found to be surprisingly helpful.

ENDOCRINOLOGY

I have left the discussion of the field in which I have been particularly interested to the last, that of endocrinology as it pertains to growth and development. This field should be a vital one for the pediatrician, because he is concerned fundamentally with the growth and development of children.

THYROID THERAPY

The value and specificity of thyroid therapy I do not need to mention, although there is still need of educational work in this field.

PITUITARY GLAND

The gland about which the most discussion has centered during the past year is the pituitary gland. The known hormones derived from this gland which are of particular interest from the pediatrician's standpoint are the thyrotropic, the gonadotropic and the growth hormones. The thyrotropic hormone apparently acts as a stimulant to the thyroid, and it is around the functions of this hormone that much controversy has arisen. Riddle claims that this hormone is responsible for growth, and that there is no such thing as an actual growth hormone.

GONADOTROPIC HORMONE

The gonadotropic hormone is responsible for the development of sex organs, and in its turn stimulates the development of other sex hormones, among which is antuitrin S, which has been used with success, in some hands, in certain cases of undescended testicle.

From animal experimentation we are fairly convinced that the acidophilic cells of the anterior lobe of the pituitary secrete a hormone which stimulates growth in every body structure, and especially skeletal growth. This hormone, as isolated by Evans, has produced most satisfactory results in animal experimentation. Varying results have been reported in clinical trials. Many workers are very enthusiastic about them. Personally, in a series of fifteen cases of pituitary dwarfism, I concluded that growth was stimulated only slightly by injections of the hormones. Standardization of material and determination of dosage may result in more striking changes. In four cases of mongolism, I obtained no results whatever; this, I believe, has been the experience of most workers with this form of treatment of Mongolian idiocy.

To my mind the field of endocrinology is one of the broadest in pediatrics. I believe that future developments in it will have far-reaching effects, and that through its teachings many of the now seemingly hopeless abnormalities of childhood may be corrected and normal adulthood assured.

IN CONCLUSION

I have limited myself in this discussion to the progress made in the fields of prevention of communicable disease and one phase of endocrinology. The conclusions to be drawn from the work in these fields may be applied to all the problems of pediatrics. Were it not for the opportunities offered us to conquer these problems, we might become discouraged; but we cannot look back over the progress of the last fifty years without experiencing a thrill of enthusiasm for the possibilities for even greater progress in the years immediately ahead.

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SLEEP DISORDERS IN CLINICAL PRACTICE[*]

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PART II[‡]

There are many adjuncts to psychotherapy, some of them essential aids, others apparently acting principally by suggestion. Employment of these adjuncts, however, is no substitute for the rational treatment of the causes.

ADJUNCTS TO PSYCHOTHERAPY

Hydrotherapy.—Hydrotherapy in all its variegated forms is one of the soundest and most practical adjuncts to the treatment of insomnia. It allays tension and promotes relaxation, permitting sleep to take place. While its greatest usefulness is in severe psychiatric disorders, it may be very helpful in ambulatory cases. A warm tub (36 degrees Centigrade) at night for thirty to sixty minutes, is possible to most patients. In the hospital, sponging, the warm wet pack, the cold wet pack, the continuous tub, the needle shower, the Scotch douche, are very important means of sedation for disturbed patients. Both cold and warm wet packs are sedative in action, but the cold packs are more powerful due to a strong initial vasoconstriction. Patients with damage to the vascular system in cold wet packs must be watched so that they do not go into shock. Senile patients in warm wet packs may develop a hyperpyrexia. A cold compress or ice bag to the head may be a great comfort. Apprehensive or suspicious patients must have the procedure explained to them or else be put in tubs. Only robust natures should be subjected to the rigors of cold douches, sprays, etc.

Electricity. — We do not use electricity, but E. Meyer [3] reports "that a weak anodal galvanic current to the head can help sleep along with other methods is undeniable. Use of the now highly publicized high-frequency wave apparatus with glass electrodes is to be avoided. Leduc waves seem to help, as do even minimal doses of x-ray on the 'tweenbrain' (diencephalon) in monthly series of three to four sittings (Wieser)."

Other Methods.—Tradition has sanctioned many tricks by which sleep may be wooed: drinking hot fluids, taking walks, counting sheep jumping over a fence, with the well-known objection that by the time one has counted 30,000 it is time to get up, and other variations of this idea. The reading of light (or heavy) literature, carefully graded to the patient's taste, has become fashionable. Methods for promoting relaxation are many, the best known being that of Dr. E. Jacobson, who has written a best seller, "You Must Relax." He believes that muscular relaxation can be voluntarily induced, but we are inclined to believe that such relaxation is as difficult to induce as sleep itself.[22] It is essential to note that we do not will ourselves to sleep, we allow ourselves to go to sleep. All active efforts to induce sleep, therefore, seem useless.

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[†] Guest-speaker address, read before the California Medical Association, Coronado Beach, May 27, 1936.

[‡] Part I of this paper appeared in the July issue, commencing on page 5.

SEDATIVE AND HYPNOTIC DRUGS

Sedative and hypnotic drugs are usually the first remedy sought by patient and doctor, after tricks like those mentioned have failed. Most of these drugs fall into one of the following groups:

1. Opium and its derivatives.
2. Hyocin and related drugs.
3. Bromid salts.
4. Sulphone group.
5. Chloral group.
6. Paraldehyd.
7. Barbituric acid derivatives.

Opium and its derivatives should not be used except for relief of intense pain or other standard medical indications. The danger of addiction is too great to permit free use in chronic cases, although some doctors use tincture opii with apparent impunity. Pyramidon is one of the best of the coal-tar analgesics, and should be tried before codein or other narcotics; although the researches of Kracke, Jackson, Madison and Squier, in respect to the pyrazolon derivatives (antipyrin, amidopyrin or pyramidon and melubrin) in causing granulopenia in specific instances must be noted.

Hyoscin has been used in cases of extreme excitement and panic states, but we do not believe that its use is necessary in the great majority of cases, and actually we never use it.

Bromid salts, introduced in 1853, have a cerebral depressant action which is sedative and only incidentally helps sleep. Bromids are eliminated slowly through the kidneys; the dangers of toxic accumulation are greatly increased in the arteriosclerotic and the aged, or in any toxic-organic disorder where metabolism is disturbed. A large fluid intake, supplemented by table salt, must be employed to insure adequate elimination. We much prefer using small doses of other drugs given throughout the day for the same purpose in order to avoid the possibility of skin rashes and toxic symptoms. While well controlled use of bromids is legitimate, the many cases of deliria and other complications resulting from their misuse due to self-medication, places an obligation on a physician to warn his patients against them.

Sulphonmethane (sulphonal) was introduced in 1888, but general usage was discontinued because of slow uncertain absorption, with the likelihood of toxic effects from prolonged use. The general effects are the same as that of paraldehyd and chloral hydrate (Webster: Toxicology, 1930). Headache, malaise and dizziness are often present even with medicinal dosages. Trional and tetranol have practically the same effect. They may be useful in early morning waking because of the prolonged effect.

Chloral hydrate, 1869, has actions similar to those of alcohol and chloroform although they are less strong and more lasting (Webster: Toxicology, 1930). The action is swift, and there is usually no after-effect with small doses. Large doses cause a burning sensation in the mouth, throat and stomach, with nausea and vomiting due to the local irritation. The chief action of this drug is its depressant effect upon the central nervous system. This drug has become unpopular in many circles, since death may occur suddenly when the heart has been weakened, as in delirium tremens and in the insomnia of continued fevers. We do not use it for these reasons.

Paraldehyd is one of the most useful drugs we have where a powerful effect is desired, since there is a wide factor of safety between the effective dose and the minimal lethal dose; there are few toxic effects which accentuate already existing damage to the kidneys and heart; it does not depress the heart and respiration; it is rapidly eliminated; the sleep is normal, and with ordinary doses without after-effects. The disadvantages are its disagreeable taste and odor, the latter persisting for some time. The ordinary dose of three cubic centimeters raised in severe cases to 15 cubic centimeters, or, better, a teaspoonful can be given every hour until effective. It is best given with iced orangeade to help disguise the taste. Since sleep ensues within fifteen minutes, the patient should be in bed when the drug is given.

Paraldehyd should be given in any case where moderate doses of the barbiturates (barbital, gr. v-x, phenobarbital gr. iss-iii, sodium amytal gr. iii-v) are ineffective. If more powerful sedation is necessary, provided there are no contraindications, sodium amytal should be given *slowly* intravenously. Paraldehyd will be found useful in all the *deliria,* especially *delirium tremens* and in *pneumonia* after the fifth to sixth day; in *manic* patients who are losing too much sleep from overactivity, losing weight, etc.; in *agitated depressions*; in *tension and anxiety states*; in *severe psychoneuroses* where the vital functions are disturbed; in *excited schizophrenics*; in *arteriosclerotics* where reversal of sleep rhythm is found; in *panic* states. It should be used whenever possible in preference to other strong sedatives and hypnotics.

A note of warning should be sounded about the possibility of chronic addiction to paraldehyd. This may occur in chronic alcoholism when the patient has learned to tolerate the drug as he has alcohol. "The symptoms resemble in some respects those of chronic alcoholism and a condition not very unlike that of delirium tremens may result." (Legal Medicine and Toxicology, Peterson, Haines and Webster, Saunders, 1923.)

The *barbituric acid (malonylurea) derivatives* are the most widely used sedatives and hypnotics for symptomatic treatment at the present time. They increase the efficacy of aspirin, phenacetin, and pyramidon. They are somewhat slower acting than chloral hydrate, but more rapid than sulphonal derivatives. They are easy to take, the toxic effects minimal with medicinal doses. They are cumulative and, consequently, effects must be carefully gauged in arteriosclerotics and the aged, in cases of damaged kidneys and impaired circulation. Since they are respiratory depressants, care must be exercised not to use them in upper respiratory infections and in influenza.

The common preparations are: barbital (diethyl barbituric acid), introduced as veronal in 1903;[16] sodium barbital (medinal), which is soluble and may be used hypodermically; phenobarbital (luminal, phenylethyl-barbituric acid, 1912) is slower acting, more slowly eliminated, and has a more profound effect. These are the official preparations. New and nonofficial remedies include sodium phenobarbital, neonal, ipral. Propanol, dial, allonal, and amytal are more recent drugs. The latter, amytal (iso-amylethyl barbituric acid) has a sodium salt which found an immediate popularity. It is quick-acting, quickly eliminated, with few toxic effects and little hang-over from ordinary doses.

Toxic symptoms may resemble alcoholic intoxication, with foul breath, nausea, characteristic slurring speech, disorientation, confusion, memory loss, tremors, ataxia, and even hallucinations and delusions. Skin rashes are common in chronic poisoning. I would like to mention the fact that, although picrotoxin is generally thought of as a medullary stimulant, its use in a case of barbiturate poisoning with delirium in March, 1936, produced marked cortical stimulation. Although this has not been fully verified, I mention it as a possible adjunct to the regular treatment of barbiturate poisoning. Maloney found it useful for this purpose in animals. (Maloney, A. H.: Barbital: Picrotoxin, Proc. Soc. Pharm., 1931.)

Many patients are afraid that these drugs are "dope," expressing a deeply rooted prejudice, probably grounded upon stories about slavery to drug addiction. It is necessary to explain in detail that they are not narcotics, and will not cause true addiction with withdrawal symptoms and other physiologic changes. We distinguish between the latter and the "psychic dependence" upon a drug, which is based upon some personality disorder helping those afflicted to escape the harsh realities of life.[46] Chronic alcoholism comes to mind as an analogous condition. This does not mean we minimize "psychic dependence" or chronic alcoholism, since both are often very profound disturbances. Just as we are on the alert to prevent true addiction to narcotics, we should be on guard against a slavish dependence on any other drug.

CAUTION IN USING DRUGS

The physician prescribing drugs must take the responsibility for any complications which may arise due to their ingestion. He should know the toxic symptoms accompanying prolonged usage or overdosage. It is becoming a commonplace in the literature that a doctor may well limit himself to a few common useful drugs and become thoroughly acquainted with them rather than to change to every new product offered by the drug houses.[1, 20, 34, 38, 40, 47, 48, 49] "Careful clinical observations of all the possibilities of a few drugs is a suitable problem for study in private practice."[20] The amounts prescribed should be carefully controlled, so that deliria or suicidal attempts may not result. To prevent the latter we believe that these drugs should be sold only on a physician's prescription.

Drugs are best administered in capsules, so that the identity and amounts are concealed and can be changed without comment from the patient. The dosage should be reduced frequently in a consistent attempt to make the patient independent of his "crutch." No patient taking drugs should be discharged. Some authors (Muncie) do not believe that drugs are indicated in the pure psychoneurotic reactions. They are most useful in the affective disorders, and in the toxic-organic groups where there is specific indication, like the reversed sleep rhythm in arteriosclerotics, or some obvious factor causing an acute condition.

REPORT OF CASES

The following cases are cited in order to summarize our approach and to illustrate the actual management in practice.

CASE 1.—O. M. is a 56-year-old white, married farmer, who complains of insomnia, especially of the early morning waking type. Explicit questioning elicits lowering of mood, decreased work efficiency, slowed thinking, with typical biologic changes of constipation, decreased sense of taste and appetite, easy fatigue, and impotence. The mood disorder began about nine months before examination, but became acute three months ago with great concern about financial difficulties, quarrels with a son-in-law, fear of the future, fear of insanity and loss of health due to insomnia. Adequate explanation of his symptoms as manifestations of a mood disorder, together with mild sedation and warm sedative baths at home (sixty minutes at 36 degrees Centigrade) brought about a rapid change. Barbital, grains 1½, at 8 a. m. and 4 p. m., was only necessary for five days. The patient saw the relation between his illness and the situation he was in rather easily and made positive constructive plans to improve the situation. He was seen five times in four weeks without any loss of working time.

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CASE 2.—Fern R. is a 28-year-old, single, white female, who, after an indifferent school career due to recessive behavior as well as a mediocre intelligence, lived with relatives following graduation from high school at the age of eighteen. She discovered accidentally, while visiting a married sister in an adjacent city, that she was much happier away from her rather demanding mother. Her insomnia began insidiously about eight months before examination following her return to her mother, becoming acute five months after the onset, when she had to help the now invalided mother to care for another sister and her two children who had come to live with them. She had previously received medical treatment for a nonspecific vaginal discharge and headaches.

Therapy consisted of explaining the patient's resources in an attempt to utilize her assets as well as her liabilities. Through repeated interviews, employing the methods mentioned, she was gradually able to face the real problem, that of emancipation from her mother, without feelings of self-condemnation. She increased her socialization, found more spontaneous interests which brought satisfaction, and was able to live at home for months at a time without a recurrence of the complaints.

Due to the apprehensiveness and tension present, she was given barbital, grains 1½, at 8 a. m., 12 noon, and 8 p. m., but this was cut down gradually after the early subsidence of the insomnia in about two weeks. At first the noon, then the morning dose was omitted. The patient was urged to take a shower at noon followed by an hour's rest; a warm bath for an hour was recommended at night when the patient felt restless.

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CASE 3.—T. R. is a 32-year-old married housewife, who complains of insomnia, feeling "on edge," being easily upset by food, unable to enjoy company, with occasional attacks of constricting sensations in her throat, accompanied by cardiac sensations. Her restlessness and emotional lability had caused an internist to suspect hyperthyroidism, but the variable metabolic rate, the coarse tremor, the real restriction of energy, the cold, clammy hands, decreased appetite, decreased pulse rate during sleep, were differential points suggesting an anxiety state. Acquaintance with the case brought out the fact that these symptoms developed in the third year of her marriage to a successful minor executive for a utility company. She had no children, hobbies or interests beyond caring for her house and husband. They had been together a great deal during the first two years of her marriage, but after his promotion to a position which required traveling, she began to have the complaints mentioned, with concomitant loss of weight, increased feeling of fatigue, gastric disturbances, poor elimination, spells of easy irritability, coupled with a tendency to depression, inability to concentrate as well as formerly, etc. Physical and laboratory examinations revealed no organic disorder. She hesitatingly revealed, after several interviews, that since her husband's frequent absences she had been lonely and felt frustrated. She intimated that, not without reason, she suspected her husband of infidelity (flirtations) when away from home. This formed a large part of her ruminations while awake at night. Association-motor studies showed tension on key words like "husband," "journey," "old age." She was gently urged to describe her difficulties at some length in three interviews before any elucidation of the cause of her complaints was entered upon. Then the patient was led by questions to review her symptoms in relation to her fear of being deserted, her loneliness and her frustration. Means were discussed whereby she could occupy her time and energy to better advantage. The husband was informed of the nature of his wife's complaints, whereupon he signified his willingness to help treatment procedure. With his coöperation the patient was given reassurance that her security was not in danger. Quick relief from symptoms resulted when obvious changes suggested to them were made. It is important to note that the patient did not want to talk about her suspicions even when directly questioned about the content of her ruminations. Persistence must be shown, for the path to true psychotherapy is not always an easy one, but it amply rewards the pains taken in sound therapeutic results.

IN CONCLUSION

If sleep is thought of as a function of the whole person, the treatment is directed against the sleep disorder at the level on which it occurs. Painstaking effort is made to rule out all environmental and toxic-organic causes. If the cause is rooted in some malfunction of the personality, the complaint is studied in great detail in relation to the personality who has it. The serial picture obtained by intimate acquaintance with the patient's problems, assets, liabilities and goals suggests specific treatment measures for that individual. The general types of these measures are known as aeration or ventilation, suggestion, reassurance, desensitization, and reëducation. These methods are as vital and as effective as the physician employing them. A few useful sedative and hypnotic drugs should be discreetly employed only as a "crutch" along with other adjuncts (hydrotherapy, packs, and exercise) to help establish rapport and to break the vicious cycle of fears often initiated by insomnia. These methods are effective in a large majority of cases.

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REFERENCES

1. Winans, H. M.: Insomnia, International Clinics, Vol. 1, Series 45, p. 39, 1935.

2. Crichton-Miller, H.: Insomnia, London, 1930.

3. Meyer, E.: Problems of Sleep, Klin. Wochschr., Vol. 13, pp. 1339-42, 1364, 1368, 1934.

4. Index Catalogue of the Surgeon-General's Office of the United States Army. (Up to 1911.)

5. Pieron, H.: Le Problème Physiologique du Sommeil, Paris, 1913. (Sixty-page bibliography quoted by Gillespie.)

6. Verhandlungen des Deutschen Kongresses für Innere Medizin. 31er Kongress, 1914, Wiesbaden. Contributions by R. Gaupp, Goldscheider, E. S. Faust, L. Rosenheld, H. Curschmann, O. Kohnstamm, E. Mohr, Friedländer, P. Schrumpf. (Excellent exposition of all aspects of the problems of sleep, with a review of the literature to date. Quoted by Muncie.)

7. L'hermitt, J., and Tournay, A.: Le Sommeil—Normal and Pathologique. Rapport à la Réunion Neuroligique Internationale, Paris, 1924. Revue Neurol., II (July), 1924. (Quoted by Muncie.)

8. L'hermitt, J.: Le Sommeil, Paris, 1931.

9. Sarason, D.: Der Schlaf. München, 1929. Contributions by D. Sarason, O. Potzel, C. Von Economo, E. P. Pick, H. Molitor, A. Straszer. (Excellent Monograph. Quoted by Muncie.)

10. Kleitman, N.: Sleep, Physiological Review, 9:624, 1929.

11. Johnson, M. H., and Swann: Sleep, General Review, Psychol. Bull., 1929.

12. Collins, J.: Insomnia. New York, 1930. (Simple lay presentation.)

13. Gillespie, R. D.: Sleep. London, 1929.

14. Bast, T. H., and Bloemendal, W. G.: Amer. Jour. Physiol., 82:140, 1927.

15. Bast, T. H., and Loevenhart, A. S.: *Ibid.*, 82:121, 1927; 85:135, 1927.

16. Bürger-Prinz, H.: On the Interbrain (Diencephalon) Syndrome and the Problem of Sleep, Monatschr. Psychi. and Neurol., 85:304, 1933.

17. Fantus, B.: The Therapy of Cook County Hospital. Therapy of Insomnia, J. A. M. A., Vol. 102, No. 22, pp. 1846-1848 (June 2), 1934.

18. Fisher, E., and Mering, J.: A New Group of Hypnotics, Therapie der Gegenwart, Vol. 5, 97-101, 1903. Abstr. J. A. M. A., 11:1037, 1903.

19. Fortune Magazine, article on "Sleep," September, 1934.

20. Grabfield, G. P.: The Treatment of Insomnia, Med. Clinics of North America, Vol. 9, No. 5, p. 1597 (March), 1936.

21. Henderson, W. E.: Present Status of Theories of Narcosis, Physiological Review, 10:171, 1930.

22. Jacobson, E.: Progressive Relaxation, University of Chicago Press, 1929.

23. Kanner, L.: Heart Action Under Different Conditions, Am. J. Med. Sc., 171:331, 1926.

24. Kalter, S., and Katzenstein, C. E.: On the Significance of the Intermediary Alcohol in Sleep and Narcosis, Münchener Med. Wochschr., 79:793, 1932.

25. Katz, S. E., and Landis, C.: Psychologic and Physiologic Phenomena During Prolonged Vigil, Arch. Neur. and Psych., 34:304 (Aug.), 1935.

26. Katzenelbogen, S.: Calcium Content of the Brain, Arch. Neuro. and Psych., 28:405, 1932.

27. Kleitman, N., and Camille, N.: Studies on the Physiology of Sleep, Am. J. Physiol., 100:474-480, 1930.

28. Kleitman, N., and Doktorsky, A.: Studies in the Physiology of Sleep, Am. J. Physiol., 104:340-343, 1933.

29. Kleitman, N.: Studies on the Physiology of Sleep, Am. J. Physiol., 104:449-456, 1933.

30. Laird, D. A.: Fatigue, Am. J. Nursing, 33:831-841 (Sept.), 1932.

31. Laird, D. A.: Calcium Metabolism and Sleep, Med. Jour. and Record, 138:396 (Dec. 6), 1933.

32. Laird, D. A.: Quality of American Sleep, Med. Rec., 139:169 (Feb. 21), 1934.

33. Laird, D. A.: Bladder Pressure and Sleep, Med. Rec., 141:78-80 (Jan. 16), 1935.

34. Laird, D. A.: Practical Considerations of a Hospital Patient, Jr. Am. Hosp., 35:380-387, 1933.

35. Laird, D. A.: Normal and Abnormal Sleep., Med. Rec., 142:13-15 (July 3), 1935.

36. MacWilliam, J. A.: Blood Pressure in Man Under Normal and Pathological Conditions, Physiol. Rev., 5:303, 1925.

37. Meyer, Adolf: The "Complaint" as the Center of Genetic-Dynamic and Nosological Teaching in Psychiatry, New England Jour. of Med., Vol. 199, No. 8, pp. 360-370 (Aug. 23), 1928.
38. Muncie, Wendell: Insomnia, Bull. J. Hopkins Hosp., 55:131-153 (Aug.), 1934.
39. Pavlov, I. P.: Conditioned Reflexes, Oxford University Press, 1927.
40. Pollock, L. J.: Disorders of Sleep, Med. Clinics of N. A., 13:1111-1120, 1929-1930.
41. Richter, G. P.: Significance of Changes in Electrical Resistance of the Body During Sleep, Proc. Nat. Acad. Scien., 12:214, 1926.
42. Stevenson, L., Christianson, B. E., and Wortis, B.: Intercranial Pressure in Man During Sleep, Am. J. Med. Scien., 178:663-677, 1929.
43. Stockman, Theo: Variations in Rhythm, Münchener Med. Wochschr., 80:618, 1933.
44. Watkins, R. M.: Mild Hypothyroidism, Ann. Int. Med., 7:1534-1539, 1934.
45. Tucker, E.: Sleep Graph, Am. J. Nursing, 33:1048, 1933.
46. Tatum, A. L., and Sievers, M. H.: Theories of Drug Addiction, Physiol. Review, 11:107-121, 1931.
47. Nielsen, Carl, et al.: A Comparative Study on Hypnotics of the Barbituric Acid Series, Jour. Phar. and Experimental Therapy, 26:371, 1926.
48. Weiss, B. J.: Comparative Studies of Sedatives Employed in the Psychoneuroses, Med. Jour. and Rec., 134:87, 1931.
49. Weiss, Soma: Therapeutic Indications and the Dangers of Intravenous Administration of Sodium Luminal and Other Barbituric Acid Derivatives, Am. J. Med. Sc., 178:390, 1929.
50. Wilson, S. A. K.: Modern Problems in Neurology, New York, 1929.
51. Grinker, Roy: Neurology, Charles Thomas Co., 1934.

PSYCHIATRY: REASONABLE ESSENTIALS FOR ITS PRACTICE*

By Sydney Kinnear Smith, M.D.
Oakland

In the privacy of our own professional chamber—as we may consider our neuropsychiatric section meeting—it has occurred to your chairman that it might be of some practical value to look at ourselves in terms of the patient's reaction to us, and to our own personalities.

PHYSICIAN'S PERSONALITY

If there is any branch of medical science where the personality of the practitioner is of importance, it is in the realm of psychiatry. It is entirely conceivable that an emotionally unstable individual might irrigate bladders successfully, or that an extremely colorless personality might remove a nasal polyp to the satisfaction of all concerned, but it is difficult to imagine an emotionally unstable psychiatrist being of much real value to his patient.

In the first place, the patient comes to the psychiatrist oftentimes with a preconceived idea that the psychiatrist can read his patient's thoughts and by some mysterious power can see "right through him." We are all perfectly familiar, through our social contacts, with the oft-expressed idea that our friends have, that they are being "psyched" when they talk to a psychiatrist. There may be those among us who combine the attributes of a Sherlock Holmes and of Sigmund Freud, but such gifted individuals are, unfortunately, rare in our profession. Consequently, our first effort in meeting a patient should be to correct any such erroneous impression, for we know well enough, if we are honest with ourselves, that we cannot live up to it, and that if we persist in trying to delude ourselves or our patients in this way, a crash is inevitable. We are not suggesting that we forthwith inform the patient that we are merely ordinary citizens without especial abilities. This is not true, for certainly the major portion of those practicing psychiatry in this country are well equipped and trained individuals. Our point is that, without losing prestige with the patient, we should make them feel that we are properly equipped to lead them out of their difficulties, but are not the possessors of any mysterious or occult power; that we are in no way akin to the clairvoyant. We believe that the more matter-of-fact path in this regard is the one that will lead more surely to the satisfactory physician-patient relationship.

FIRST CONTACT IMPORTANT

We cannot stress too much the importance of the first contact, and the building up on the part of the patient a set of reactions toward the psychiatrist that are of positive value in our subsequent therapy. Some of you may call this the establishment of a positive transference, but the thing we have in mind is something more comprehensive than transference in the analytical sense. It is a combination of a feeling of respect combined with a sense of security.

This establishment of a rapport depends, of course, on a number of things. In the first place, as we have mentioned, is the need of avoiding the atmosphere of mystery. It may work temporarily, but it is short-lived, and its death is violent.

In the second place, and somewhat akin to this first suggestion, is the avoidance of an attitude of a too profound wisdom. We find this matter referred to not infrequently in psycho-analytical literature, and it may well be emphasized in even a wider application than psycho-analysis. Jeliffe has referred to the wise nodding of the head as the physician intimates that he has anticipated the patient's story as something to be avoided.

The next thing that the patient may reasonably expect of us is the avoidance on our part of rash promises, given as a result of undue enthusiasm, or because we are fearful of telling the patient the truth. We believe that we are just when we say that as psychiatrists we are under an even more careful scrutiny from our patients than the average physician and, consequently if, in an unguarded moment we make promises that we can not live up to, we soon pay the price in the loss of respect from our patients. We believe that the most desirable procedure is to explain, as reasonably as is possible to our psychoneurotic, and even to our psychotic patients, the method of our anticipated procedure, giving them as nearly as we can an intelligent idea of why such a procedure is to be followed. There is no doubt but that we get a greater degree of coöperation from patients so instructed.

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* Chairman's address, Neuropsychiatry Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

MAINTENANCE OF BALANCE IN JUDGMENTS

Next we come to the consideration of balance in our procedure. By balance we are referring to the ability on the part of the psychiatrist to use to the best of his ability, the features of each form of psychiatric procedure most suited to the case in question. Suggestion, persuasion, hypnosis, analysis, and chemotherapy, each have their place in our armamentarium. We believe that the majority of our profession in this country adhere to such an attitude, and to this larger group we are not speaking, but we are keeping in mind that minority who are, temporarily at least, carried away by the therapeutic possibilities of one of these lines of procedure. We are thinking of that class of enthusiasts, who, as Gordon Holmes once said, are worshiping a God called Freud, or of our ardent hypnotists, and of many other one-sided, oft-times misguided physicians. We are thinking of the type of procedure that we had the misfortune to witness not long since of a well trained, highly enthusiastic analyst who proceeded hopefully to work out the complexes of a bed wetter who had chronic cystitis—a fact that was not determined by examination until three months after the analysis was under way.

Our aim in this communication is not to ridicule the analytical or any other procedure, but rather to stress the need of a wider vision that allows the use of each of these procedures as indicated. We would not expect a surgeon to insist on the electrocautery for all ailments in his field, granted that for certain malignancies electrocautery may be the weapon of choice. A surgeon who would so insist would be considered poorly balanced—as the psychiatrist should be who sees therapy in terms of single procedures. We believe that these single-track practitioners are bringing ill-repute to psychiatry and psychiatrists, and are wandering far away from the enlightened precepts of the leaders of our profession—Myers, Campbell, Hoch, Amsden, Hart, and a host of others.

BACKGROUND OF THE PSYCHIATRIST

It may be apropos to think briefly at this point of the type of person who should consider psychiatry as his field; for many of the pitfalls that we are considering are the result of the wrong type of individual having entered the ranks of psychiatry. Briefly stated, we feel that the individual entering psychiatry should essentially be the sort of person that we may somewhat inaccurately speak of as being subjective-minded in contrast to the objective-minded person. In other words our ranks are better filled by the philosophers in medicine than by the skilled mechanics. Patience and vision are requisite, and are qualities that our objective-minded individual cannot be expected to produce in adequate amount. These persons will find themselves much more at home in such realms as nose and throat and surgery, rather than in psychiatry.

Our ideal practitioner in the realm of mental science needs, especially, a wide cultural background. The diagnostic criteria of Kraeplin are excellent, and the nomenclature of the American Psychiatric Association, admirable; but neither provide the cultural equipment that is essential to the wide vision necessary in dealing with psychiatric material.

As has often been pointed out, it is insufficient to consider patients as individual units, but rather they must be thought of as fitting into a world picture. How can we do this satisfactorily if we haven't a world picture ourselves? To have this we must have a knowledge of racial development, world history, some background of literature, art and thought throughout the ages. Even current Broadway successes and best-sellers should be more than names to us.

Aside from being able to fit the patient into the wider setting of a world picture, we should be able to meet him reasonably well at his own intellectual level. If he chances to discuss the paintings of Van Gough he has a right to expect that the psychiatrist will not look blankly at him as though he were discussing a breakfast food. Wagner should mean more than "heavy music," and Eugene O'Neil more than the producer of plays of questionable morals, and "Idiot's Delight" more than another term for autoerotism. We will gladly grant that any full knowledge of the variety of the intellectual demands upon us is well nigh impossible, but we do contend that to practice psychiatry properly we are forced to keep up a voluminous reading, much of it not found in our scientific journals.

EMOTIONAL BALANCE OF THE PSYCHIATRIST

And finally, we come to the matter of emotional balance on the part of the psychiatrist. All too often we have all been told that the psychiatrist is practicing in that field of medicine because there is something wrong with him emotionally, and next we have been told that the psychiatrist ultimately goes crazy. These popular fancies are too ridiculous to discuss, but we must admit the need of an emotional balance on the part of the physician dealing with emotional disorders. The thought, often expressed, that one can understand their patients better if they have gone through similar experiences may have some truth in it, if the psychiatrist has gone through the experience to a successful adjustment. Unfortunately we cannot supply every schizophrenic with a recovered schizophrenic physician. At the outset of his career the person anticipating psychiatry should evaluate his own emotional equipment, and if he finds it faulty, should attempt its rectification before undertaking the practice of psychiatry. Individuals who are unduly aggressive should hesitate to enter the ranks until this characteristic is well in hand.

The inferiority complex has no place in the practice of psychiatry, unless satisfactorily compensated for. The same should be said for the other evidences of emotional instability.

IN CONCLUSION

In conclusion, may we summarize our reflections on the requirements of psychiatric practice by defining an adequate psychiatrist. Such an ideal individual might be described as being equipped with a carefully planned training in the theory and practice of psychiatry; a person able to avoid the pitfalls of therapeutic fads and fancies; one big enough in his caliber and outlook to avoid an attitude of mystery, and unpossessed wisdom; one who, from reason of his intellectual and cultural background, is able to consider his patient as a part of a community and world scheme rather than as an isolated unit. Added to these requirements as an essential factor is the presence of an emotional stable personality.

230 Grand Avenue.

EPITHELIOMATA OF THE SKIN[*]

SOME CLINICAL NOTES

By Douglass W. Montgomery, M.D.
San Francisco

Discussion *by Hiram E. Miller, M. D., San Francisco; H. J. Templeton, M. D., Oakland; Arne E. Ingels, M. D., San Francisco.*

The Diagnosis of Epithelioma.—Usually the diagnosis of epitheliomas of the skin is easy, so easy in fact as in itself to be a source of error. There is the elderly patient with keratoses of the skin, as well as the graver malignant lesion or lesions. The epithelioma is usually an ulcer of small size, indolent, and having a rolled or nubby border caused by epithelial infiltration, which itself differs by its waxy appearance and firmer consistency from the inflammatory infiltrations. Under such circumstances the diagnosis is eminently simple. Besides the above there is also the situation of the growth on the face or on the back of the hands. However, one must not forget that epithelioma may occur wherever epithelium is. I shall not quickly forget a lesion situated on the anterior surface of the thigh just above the knee that looked exactly like an ecthyma with its prominent hard, dark, tightly adherent crust situated in a bright field. The affection, however, had been present altogether too long to be due to such a swiftly moving affair as streptococcic infection. It had been present for nineteen years but had been growing more rapidly of late. After soaking off the crust with boric acid solution the characteristic rolled border was revealed.

IMPORTANCE OF THE ADVANCING INFILTRATIVE BORDER

The most important feature, both symptomatically and pathologically, is this advancing infiltrative border, and this can assume many different forms, such as a thin line, or a rolled or nubby border. But the most striking variations occur when the infiltrating cells degenerate either unusually slowly or unusually quickly. In the latter the degeneration occurs so quickly that no visible infiltration takes place, and consequently there is no characteristic border. On curetting, a rather deep hole is exposed, with sharp, steel edges, and the contents have a glairy appearance likened to rabbit flesh. In the other case the epithelial cells show little tendency to degenerate and the infiltration extends out under the surface as a plate. Under such circumstances, the attention being fixed on the ulceration, the smooth plate the color of old ivory, extending out beyond the ulcer, may escape notice. In fact, not long since I nearly made this mistake myself. At times this kind of infiltration gives rise to a remarkable lesion, looking like a flattened button with rounded borders and sunken center. It has the yellow, old ivory color above mentioned and the epithet "morphea-like," given by Hartzell, is one of the finest similes in medicine, and indicates how easily one may slip in the diagnosis.

It is self-evident that the whole infiltration must be treated in order to secure a perfect result. The elusiveness of this mistake goes beyond the immediate future, as the wound made in treating the ulcer may heal perfectly, leaving one with a perfect sense of security. Furthermore, the treatment by radiant energy alone may also be followed by only temporary healing, as these infiltrating cells are quite resistant and they are covered by an intact surface epithelium which constitutes an excellent screen for the subjacent tissues, hindering the full action of the rays.

THE TENDENCY OF SEBORRHEIC SKIN TO CANCEROUS DEGENERATION

One must never forget the type of skin on which an epithelioma occurs. It is almost invariably seborrheic, that is to say, it is either unduly dry and brittle with a tendency to develop dry hard crusts, under which the epithelium may degenerate into epithelioma; or the skin may be oily, with the formation of greasy crusts with a tendency to malignant change. These seborrheic types of skin usually occur in the aged, or at least in those well up in years. They may, however, happen in the years of full manhood, with the patient showing all the signs of vigorous health, possibly too vigorous health, as overnutrition leads exactly to the same degenerative end as undernutrition.

REPORT OF CASE

Case 1.—Such was the case of a markedly full-blooded man, forty-six years of age, who sought freedom from an epithelioma of the right temple, where he had received an injury five years previously. The lesion at its upper edge had evidently healed, leaving an indurated uneven red surface. Still farther above this there was a desquamating patch, and on the left temple there was a small nodular epithelioma. The seborrheic changes above adverted to had begun in the temporal regions, and the desquamating patch on the right temple showed that the tendency to malignancy extended beyond the region of full malignant change.

All of these lesions had to receive attention and, furthermore, one had to realize that other epitheliomata, independent of these, would inevitably arise on his overnourished skin. And any effort by admonition to cut down this nutrition in such a man would be preaching in the desert.

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[*] Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

At times this seborrheic change in the skin is most profound, involving in the utmost disorder both the surface epithelium and the sebaceous glands.

A case report follows:

Case 2.—I once had under my care a powerfully built, middle-aged man with a florid rosaceous complexion. The nasolabial grooves, the "lineae dolorosae" of Alphonse Daudet, were deep and the corners of the mouth were drawn down, giving him the facies of the chronic dyspeptic. He had gingivitis with marked retraction of the upper gums in front, where there were a number of leucoplasic patches. His vascular system was as deeply affected as his digestive, and he had a pulse visible at the wrist. He had been a dairy farmer, and had always consumed large quantities of milk, cream and butter; and, even after abandoning farming and becoming a teamster, he said he was "right smart" on milk. Periodically, too, he was a heavy drinker. There were many crusts on the face and on the back of the hands; those of the nose were green in color. The whole red of the lower lip was occupied by a crust, and there was a crust on the median line of the red of the upper lip. The skin of the neck was a golden yellow, and deeply wrinkled in every direction.[1] This change I have observed only in outdoor workers, and it is most striking. He had a seborrheic eczema over the sternum that was curiously linear, looking like streaks of withered skin running downwards and outwards. The skin, as above described, was profoundly seborrheic, and on this skin in the lateral malar region there developed a soft, rapidly growing epithelioma, looking like a strawberry.

Instead, however, of being generalized, the seborrheic process may be localized.

Case 3.—Such was the case of a woman with dry atrophic epitheliomata in both earshells. In this location she had also an equivalent kind of seborrhea as being dry and hard, and the sebaceous orifices in this region were filled with dry, brown, horny plugs.

And, by the way, the hollows of the earshells are particularly apt to be seborrheic. Colcott Fox first drew my attention to the frequency of seborrhea in this situation.

CHANGING VIEW CONCERNING THE DEGENERATION OF THE EPITHELIAL CELL

Up to quite recently the epithet, cancer, has not been given to a lesion until it has infiltrated the subjacent connective tissue. With the increasing interest in the epithelial cell and its degenerations, this view is changing, and recently Louis Savatard has described what he calls psoriasiform carcinoma of the skin. He designates it as an intra-epithelial epithelioma. In it the cells show the degenerative lesions of epithelioma, but the epithelium has not dipped down into the subjacent connective tissue of the skin. Many so-called precancerous lesions on the skin would come within this category, as would Bowen's disease and also Paget's disease, whether of the nipple or elsewhere.[2]

EPITHELIOMA OF THE EARSHELL

Epithelioma of the earshell is frequent, and is usually easily diagnosed. There is a lesion, however, that occurs on the border of the ear which may be confused with epithelioma—"painful nodule." As its name indicates, it is very tender and causes trouble at night by contact with the pillow. The treatment for this affection is to split the skin over the painful spot and cut out a piece of the underlying cartilage. I had a patient who suffered both from epithelioma and painful nodule, each requiring its own form of treatment.

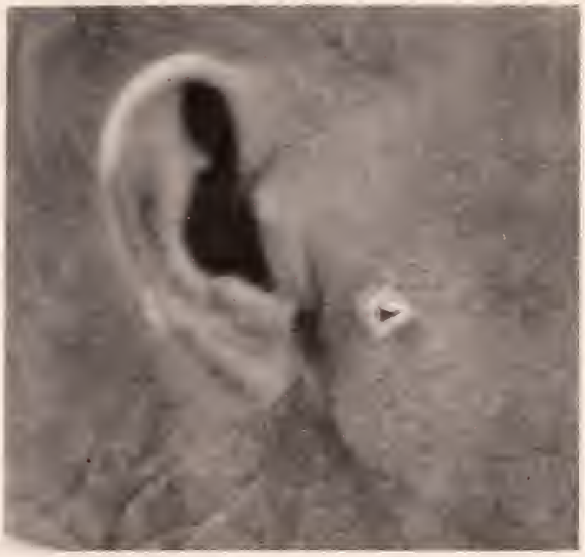

Fig. 1.—A keratosis of the cheek had been present for about five years. The whole area was seborrhoeic and the sebaceous glands showed through the thin light-colored skin as yellow fat granules. Nine months after the first visit a tuberous, easily bleeding epithelioma, as seen in the photograph, had developed which, under the curet, came out as a ball, leaving a shallow depression. On the neck is to be seen the deep wrinkles of the condition called cutis rhomboidalis nuchae.

It has always seemed to me that epitheliomata of the earshell tend to be decidedly more malignant than those of any other part of the skin, and I have attributed this to the fact that the earshell is one of the organs of our body that is slowly regressing. After treating an epithelioma of the earshell, I always warn the patient to return to the office on the occurrence of any persistent rough patch, so that it may be treated in its incipiency. I also regard epitheliomas of this region as particularly liable to metastasis.

EPITHELIOMATA ARISING FROM EPITHELIAL LININGS OF SEBACEOUS GLANDS

Epitheliomata, of course, may spring from the epithelial lining of a sebaceous gland, and are especially dangerous for three reasons: They lie deeper and, therefore, remain hidden for a longer time; they have not the benefit of the warning voice of pain; and they are more apt to be spinocellular, and, therefore, more malignant than those arising from the surface. The brother of a physician illustrated this variety.

Case 4.—He had a large sebaceous pore on the right cheek filled with sebum, and about it there was an extensive but well-circumscribed induration. There was a small lymph-node under the right side of the lower jaw, suspected to be metastatically infiltrated. The lesion had been present for four or five years.

Analogous to this, as growing unsuspectedly in the depth, was the case of an elderly man with an epithelioma of the navel which had been treated as a papilloma.

Case 5.—When I saw this patient, the navel was occupied by a red, hard, finely granular mass, which bled spontaneously. Below this, in the depth of the skin, there was an indolent indurated tumefaction at least three inches in diameter. The lymphatics in the left groin were enlarged, but freely movable; those in the right felt like small granules.

It is with such cases as these that the physician who first sees them is particularly unfortunate, as he is blamed for being either careless or for lacking in diagnostic ability, whereas the man who is finally consulted, when any tyro can make a diagnosis, is regarded as being shrewd and clever. There is an old saying: "Happy is the physician who is called last in a case."

Face Epitheliomata.—Epitheliomas of the skin are far more frequent on the face, particularly on the anterior aspect of the face, than in any other region. Next to the face they occur on the back of the hands. Both of these surfaces are exposed to light and to the inclemencies of the weather. I take it that light is more damaging in this respect than any other factor, and that it is particularly noxious for those who are naturally unable to form pigment and under the sun's rays do not tan, but burn.

Keratoses of the Hands.—For some unknown reason the keratoses on the back of the hands are different from those on the face. The skin in this region shows the effects of age more quickly than in any other region. It becomes thinner, loses its elasticity and looks faded. The keratoses are very much harder and more compact, and much more difficult to curet than those of the face. If care is not exercised in curetting, one is liable to rip the skin, often laying back a considerable flap, not at all desirable. With local anesthesia and a gentler, more persistent approach, and with the aid of liquor potassae to soften the hard masses, one can curet out these masses without ripping the skin.

Very often it is better to use a corneal spud rather than a curet. And by the way, the corneal spud is an admirable instrument, introduced into our office by my associate, Doctor Viecelli. It insinuates itself much better than a curet under the layers of epithelium, lifting them off layer by layer.

Strangely enough, these hard masses do not show anything like the same strong tendency to degenerate into cancer that those on the face do. We, however, from time to time do meet with exuberant cancer in this region.

PERSISTENCE OF EPITHELIOMATOUS DEGENERATION

There are cases in which an epithelioma is removed and the base treated by irradiation, but in which keratoses form on the scar, and under these keratoses in this new scar tissue epitheliomatous degeneration takes place. The scar may appear to be perfectly healthy and yet this type of degeneration continues, and it evidently does not come from the depth but always, as before mentioned, first arises on the surface as a keratosis. This is not the same as the condition called benign cystic epithelioma, which forms little cysts lined with epithelium and filled with a jelly, and which also shows an inveterate tendency to recur *in loco* in spite of anything that may be done, either operatively or by irradiation. In fact they are not at all influenced by irradiation. It is thought that these latter are in their nature nevi.

In operating, the psychic influence of the situation of a cancer is often most important. I once had an interesting experience with this source of error. A surgeon was removing a cancer from the side of the face. His line of incision took a wide sweep forward, unnecessarily wide, but as it came around in front of the ear it approached nearer and nearer to the tumor until directly in front of the ear it even slanted forward under it. One could see that he had in mind to avoid the ear and also the facial nerve. When the tumor was removed it was seen that he had cut through a cancerous nodule, half of which was left *in situ*. As this error was recognized, it was corrected, but it could easily have escaped notice. The surgeon was a well-educated, well-trained, experienced man, but the temptation to avoid entering troublesome ground acted almost subconsciously on his mind, and guided his hand.

IN CONCLUSION

The foregoing is a narrative of some of the traps that nature lays for us in dealing with a most treacherous disease. Cancer is an infiltrative disease and, therefore, naturally has no definite borders, and, knowing this, one must in treating it go beyond the visual border. Furthermore, epithelioma arises almost invariably on a degenerative skin and represents the high point in this degeneration. It is, of course, impossible to remove the whole skin, so this dangerous high point is the only portion removed. The remaining skin continues liable to the same form of degeneration. This is inevitable, but it gives rise to many misunderstandings between patient and physician.

These are some brief sketches of personal experiences with a most elusive affection, elusive because of its mimicry of other diseases leading to erroneous diagnoses, and also because it is infiltrative and, therefore, deceptive, as to the extent of the infiltration. And in addition to this cancer is a degenerative manifestation of a more general tissue malady and, while the individual lesion may be eradicated, yet the tendency continues.

450 Sutter Street.

REFERENCES

1. This is the cutis rhomboidalis nuchae of Jadassohn and Nikolsky, an example of which is shown in the photograph. Die Haut u. Geschlechtskrankheiten, herausgegeben von Prof. Dr. Leopold Arzt u. Prof. Dr. Karl Zieler, Berlin, 1935. Lieferung 21/22, s. 487.

2. Psoriasiform Carcinoma of the Skin, by Louis Savatard, the British Journal of Dermatology, (Feb.), 1935.

DISCUSSION

Hiram E. Miller, M. D. (384 Post Street, San Francisco).—In a pleasing and informal way Doctor Montgomery has given us many interesting facts in regard to epitheliomata of the skin that are not found in textbooks. It is unfortunate that, under diagnosis, he did not differentiate between basal-cell and squamous-cell epitheliomata. They generally have such distinct characteristics,

I have not found in my experience that epitheliomata of the ear are "particularly liable to metastasis." They are generally of the squamous-cell type, and frequently remain without metastases for a year or more. This would be very unusual in any other location.

I did not have the impression that epitheliomas arising from the lining of sebaceous glands were mostly spinocellular in type. Those arising around a comedo or patulous follicle have practically always, in my experience, been of the squamous-cell type, but I assumed that they came from the surrounding epithelium or lining of the duct and not the gland itself. Many deep-seated basal-cell epitheliomas apparently arise from the sebaceous glands, sweat glands, hair follicles, etc.

The author has emphasized the occurrence of epitheliomata on degenerative skin, and the fact that it is impossible to remove the whole skin. This fact, however, should be explained to the intelligent patient to safeguard misunderstanding and to help him understand his disease.

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H. J. Templeton, M. D. (3115 Webster Street, Oakland).—After a clinical diagnosis of cancer of the skin has been made, two important questions arise. First, what is the cell type of the malignancy—is it a basal-cell epitheleoma or a squamous-cell epithelioma? This is of far more than academic interest, for upon this point one must base his decision as to whether local destruction is sufficient, or whether he must consider removal of the glands draining the area involved. If the growth proves to be of the basal-cell type, thorough local destruction is sufficient. If it is of the squamous-cell variety, one must consider whether or not the degree of involvement calls for an attack upon the regional lymph glands by means of surgery or radiation.

Our procedure is to remove a piece of tissue, preferably from a non-ulcerated, non-infected area of the tumor by means of a deeply cutting, electrically driven punch. This tissue is examined immediately by frozen section if we feel that it is urgently required, but usually we believe that the delay of two or three days which is required for ordinary paraffin sections does not endanger the patient's chances. For, immediately upon completion of the biopsy, we destroy the local lesion quite radically.

The second question that arises when skin cancer has been diagnosed is in regard to what treatment should be given. Success in the treatment of skin cancer obviously depends upon the complete destruction of all cancer cells. This may be accomplished by several different methods or combination of methods. The choice of methods will vary with different cases. We believe that that method is best with which the individual operator is most familiar. Wide surgical excision, the actual cautery, electrosurgery, radium, or x-ray—all of these will cure most cases of skin cancer if properly applied. However, in the average run of cases we must confess a personal preference for methods of destruction, especially electrosurgery of the actual cautery, rather than radiation therapy. There are no cancers which are incapable of destruction by such means, while, on the other hand, it is well known that some cancers are not destroyed by conservative doses of x-ray or radium. True it is that radiation can be given in such heavy doses as to actually cauterize and destroy the cancer, just as effectively as an actual cautery does; but with such massive doses the normal tissue cells beyond the cancer receive such heavy doses of radiation as to be permanently damaged. This does not occur with electrosurgery or the actual cautery.

In stating this personal preference for destruction, as opposed to radiation therapy, we do not mean to imply that radium or the x-ray should not be used. We feel that they are invaluable, but that they should be employed in certain selected cases, or as an adjunct rather than routinely.

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Arne E. Ingels, M. D. (490 Post Street, San Francisco).—With Doctor Montgomery's vast experience in his career as the pioneer in dermatology on the West Coast, I feel rather humble in commenting upon his most interesting article.

I would like to mention the fallacy of the strict classification of epitheliomas as basal-cell epitheliomas and squamous-cell epitheliomas.

The clinical appearance of a basal-cell epithelioma. with its waxy, transparent nodular and raised border may indicate a less radical treatment, since no classically listed basal-cell epithelioma has been known to metastasize.

However, I have seen a number of epitheliomas showing the clinical appearance of basal-cell epithelioma which histopathologically manifested themselves as the basal-cell, squamous-cell epithelioma type. I think the treatment should be radical, whatever means are preferred, if a biopsy is not taken.

Secondly, I shall mention the superficial epitheliomatosis: the slowly advancing, almost imperceptibly raised border, may leave a slightly atrophic or normal looking surface. The less experienced will easily confuse these with eczematous patches or lupus erythematosus, and treat them as such. Keeping in mind that they actually may represent a mixed basal-squamous cell epithelioma, they require the radical treatment as much as the clinically more conspicuous ones.

Doctor Montgomery's mentioning the benign epitheliomas of the skin is essential for the understanding of the genesis of the epitheliomas. Modifications of the normal basal-cell layer develop into the intermediary benign epitheliomas as the epithelioma adenoides cysticum-syringoma-cylindroma group with further developments into the extremes, the clean-cut malignancies and their anaplasias.

* * *

Doctor Montgomery (Closing). — The remark that my paper does not include more on the subject of cancer is an unexpected pleasure, as it assures me that it is not tedious. I am reminded of Voltaire, who said that all writing is good, provided it is not wearisome. And the great French satirist did not leave you in doubt as to what he meant by wearisome, since he added, "If you wish to be wearisome, say it all." In fact I need not add that there is a good deal more to be said about epithelioma than is contained in my paper.

Regarding the differentiation between squamous- and cuboidal-celled epitheliomas, I think it was Darier who first strongly accentuated this distinction; but that eminent pathologist soon found that the distinction was not so simple, and shortly afterward my primary enthusiasm was dampened by the examination of a band-like growth across the lip which at one end was cuboidal- and at the other squamous-celled. About this same time a well-known dermatologist made the sweeping assertion that all epitheliomas of the exposed red of the lower lip were squamous-celled, which is not so. And, by the way, sweeping assertions are apt to be erroneous.

As for biopsies, if possible a diagnosis should be made without resorting to them. A biopsy to be thoroughly effective should include some of the normal tissue beyond the border of the lesion. This of course increases the scar, and the extent and nature of the scar resulting from annihilation or extirpation of an epithelioma is frequently a grave matter. The cicatrix resulting from any operative procedure should be as pliable and smooth as possible, not alone because of its cosmetic effect (and this is important), but also because a bad scar is more apt to degenerate into cancer than a good one. The subject of the liability of scars to cancerous degeneration is important, and sometimes disregarded. One of the great advantages of correctly applied radiant energy is the beneficial effect it has on the formation of the scar following the operation.

CHEMOPROPHYLAXIS OF POLIOMYELITIS[*]

(A PROGRESS REPORT)[†]

By E. W. SCHULTZ, M.D.
AND
L. P. GEBHARDT, M.A.
Stanford University

THAT the olfactory nerve is the common portal of entrance of poliomyelitis virus is now well established: Schultz and Gebhardt, 1934;[1] Brodie and Elvidge, 1934;[2] Lennette and Hudson, 1935.[3] It is also clear from recent experimental studies that the administration of specific immune serum does not afford significant protection against subsequent intranasal instillation of monkeys with poliomyelitis virus: Schultz and Gebhardt, 1935.[4] The failure of immune serum to afford protection against instranasally-inoculated virus may be explained by the fact that the terminals of the olfactory nerve are so situated that they cannot be effectively guarded by immune plasma, and further explained by the fact that virus once established in the olfactory or other nerve tracts is, for the most part, safely out of reach of humoral antibodies. It has, moreover, been quite conclusively shown that the injection of poliomyelitis vaccines, at best, results in the production of humoral antibodies, with no recognizable increase in tissue resistance, or significant protection against virus administered by the intranasal route: Schultz and Gebhardt, 1935;[5] Olitzky and Cox, 1936;[6] and Hudson, Lennette and Gordon, 1936.[7] These observations seem to leave little prospect of a practical solution of the poliomyelitis problem by orthodox means. It has become necessary, therefore, to seek a solution in new directions.

RECENT STUDIES REPORTED IN THE LITERATURE

In 1934, Olitzky and Cox[8] made the interesting observation that a dilute tannic acid solution in distilled water, dropped into the nostrils of white mice three times a day on three successive days, served to protect these animals against intranasal instillation of equine encephalomyelitis virus administered on the fourth day. The protection afforded was transient, since it disappeared almost completely by the tenth day. Soon after, Armstrong (1935)[9] made similar observations on experimental St. Louis encephalitis in mice, using sodium alum as the protecting agent.

AUTHORS' STUDIES

Without being aware of these latter interesting observations, we undertook, in the spring of 1935, to test the possibility of protecting monkeys against intranasal infection with poliomyelitis virus by chemical means. We first tried tannic acid; but finding the results of two experiments somewhat irregular, we turned our attention to picric acid and certain other agents. Soon after (May 31, 1935), Armstrong and Harrison[10] reported that monkeys which had previously received intranasal treatment with 4 per cent sodium aluminum sulphate, exhibited a high incidence of protection against subsequent intranasal instillation of virus. The duration of the protection was not determined. Several months later, in January, 1936,[11] these observations were confirmed by Sabin, Olitzky and Cox, who found that 4 per cent tannic acid also afforded temporary protection. On February 5, 1936, we[12] reported to the Pacific Coast Section of the Society of Experimental Biology and Medicine observations which indicate that protection is also afforded by picric acid, p.-nitrophenol, trinitrocresol and by mercurochrome. These observations showed that the protection afforded may, in some instances, be of several months' duration. Late in the same month (on February 28) a paper by Armstrong and Harrison[13] appeared, dealing with further studies on chemical protection of mice against intrasanally-instilled St. Louis encephalitis virus, and with the protection afforded monkeys by picric acid against intranasally-instilled poliomyelitis virus. Although they made no observations on the actual duration of the protection afforded, and their technical procedures were not altogether like ours,[‡] the results were essentially the same.

SUMMARY ON THE AUTHORS' OBSERVATIONS

We wish at this time to present a summary of our observations to date, and to indicate the possibilities offered by further investigations in this field.

Of sixteen monkeys given three successive daily intranasal irrigations with 1 per cent aqueous solution of picric acid, only three animals succumbed to intranasal instillations of 10 per cent virus suspensions (three instillations on one day) administered one to eight days following the treatment; one of those developing poliomyelitis had been given intranasal washes with saturated aqueous lithium carbonate, in an effort to remove the picric acid from the nasal mucosa. Of the thirteen monkeys which survived, ten escaped a second instillation of virus administered eighteen to thirty-nine days after treatment; the three which became infected received the virus instillations twenty-seven, thirty-one and thirty-nine days after treatment with picric acid. Only eight of the survivors have been tested further. Of these, five escaped a third instillation of virus administered forty to sixty-eight days after the treatment. Of the remaining five animals, two out of three which had gone sixty days, developed poliomyelitis after a fourth instillation of virus. One resisted nasal virus seventy-three, ninety-four, 108 and 129 days and one eighty-nine days after the original treatment. One of the latter two died of an intercurrent infection 110 days after the original picric acid treatment; the remaining animal withstood a

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[*] From the Department of Bacteriology and Experimental Pathology, Stanford University, California.

Read before the Northern California-Hawaiian Branch Society American Bacteriologists, meeting with the Pacific Division, American Association for the Advancement of Science, in Seattle, June 19, 1936.

[†] These studies were supported by a grant from the President's Birthday Ball Commission for Infantile Paralysis Research.

[‡] The monkeys are deeply anesthetized, placed in a vertical position, and the nasopharynx thoroughly irrigated with about 30 cubic centimeters of the chemical.

fifth intranasal instillation of virus ninety-two days after treatment, but developed poliomyelitis after a sixth virus instillation 121 days after the treatment with picric acid.

Of six monkeys treated with three nasal washes of 1 per cent picric acid neutralized to pH 6.9, three failed to resist inoculation ten days after the third treatment. Two of the remaining three monkeys have further resisted inoculation thirty-one and fifty-five days after treatment, while one died of tuberculosis seven days after the second virus inoculation. Each picric acid wash was preceded by a nasal spray of 0.25 per cent neosynephrin.

In still another experiment twenty monkeys were given intranasal sprays with 1 per cent picric acid in physiological saline solution on three successive days and thereafter once a week. Virus instillations were begun one day after the third treatment and continued daily, with the exception of the days on which the picric acid treatments were administered. This has to date been carried on for a period of about three weeks, with the result that nine of the ten controls used have developed poliomyelitis, while only six of the twenty animals treated have come down with the disease. The daily virus instillations and weekly treatments with picric acid are being continued with new sets of controls.

ON THE RELATIVE EFFICACY OF REPEATED WASHINGS

Observations on the relative efficacy of repeated washings with lower concentrations of picric acid are too limited and irregular to justify detailing here.

Of a total of thirteen monkeys given three successive daily nasal irrigations with 2 per cent aqueous solution of mercurochrome (No. 220 solution), one only developed poliomyelitis following intranasal instillation of virus administered two to six days later; one died of an intercurrent infection twenty-five days later; of the eleven remaining animals all have resisted intranasal instillation of virus twenty-three to thirty-one days after the treatment (one died of an enteritis twelve days, and one of tuberculosis two days following the second virus inoculation). The remaining nine animals were given a third instillation of virus on the thirty-eighth to fifty-second day after treatment (one died later of tuberculosis and one of enteritis). One only developed poliomyelitis. The remaining six monkeys were inoculated again fifty-eight to seventy-nine days after treatment. This time two developed poliomyelitis (one given virus fifty-eight and one seventy-three days after treatment). One died of enteritis two days after inoculation. (It might be well to note that the majoriy of the animals are observed from twenty-one to thirty days before each reinoculation with virus).

Of twelve monkeys which had been given intranasal irrigations with 1 per cent mercurochrome on three successive days, ten resisted intranasal instillation of virus one to eighteen days later. These two developed the disease when inoculated eleven days after treatment. One died twenty-two days later of an intercurrent disease. The remaining nine monkeys were reinoculated thirty-one to sixty days after treatment. One inoculated thirty-two days and one fifty-three days after treatment developed the disease, while one died of an enteritis two days after the third virus inoculation. Of three animals which had been given the mercurochrome (1 per cent) by simply dropping 2 cubic centimeters of the dye into the nostrils once a day on three successive days, only one developed poliomyelitis when tested eleven days after the third dye wash. The remaining two monkeys have resisted nasal virus thirty-two, fifty-three and seventy-seven days, respectively, after the original treatments.

Seven out of seven treated monkeys resisted virus when tested ten days after they were treated on three successive days with 1 per cent mercurochrome (phosphate-saline pH 8.6). These seven monkeys were reinoculated thirty-one days after treatment, and this time two animals developed the disease. These monkeys received a nasal spray of 0.25 per cent neosynephrin one-half hour before each mercurochrome wash.

Five monkeys received a similar treatment (but without neosynephrin) with 0.5 per cent mercurochrome and virus given nasally eleven days after the third dye treatment: three developed the disease: one died of an enteritis on the tenth day, and one survived the virus inoculation. This surviving monkey has further resisted nasal virus thirty-two and fifty-three days after the original mercurochrome treatment. Of six monkeys receiving three successive daily nasal washes with 0.5 per cent mercurochrome (phosphate-saline pH 8.6) and sprayed nasally with 0.25 per cent neosynephrin one-half hour before each dye treatment, only one developed the disease when inoculated ten days after the above treatment. One of these animals died of an enteritis three days after the virus inoculation. The remaining four animals were reinoculated thirty-one days after treatment, and this time two developed the disease. Three other monkeys were given three successive daily nasal washes with 0.25 per cent mercurochrome, and then given virus nasally two days after the third dye treatment; all three developed the disease.

EFFECTS OF OTHER CHEMICAL AGENTS

The effects of a number of other chemical agents have been less extensively studied. Four monkeys given intranasal washes with 1 per cent aqueous paranitrophenol resisted instillations of virus two to seven days after treatment. Three resisted a second instillation of virus thirty-one to thirty-nine days after treatment, while one developed poliomyelitis when inoculated thirty-one days after treatment, and one died with an enteritis eighteen days later. The two remaining animals resisted a third instillation of virus administered fifty-two days after the treatment. One, however, succumbed to poliomyelitis following a fourth instillation seventy-three days after chemical treatment and one died of tuberculosis twenty-nine days after the fourth instillation of virus.

Of three monkeys treated with a 0.5 per cent aqueous solution of paranitrophenol one resisted an instillation of virus two days later; one developed typical poliomyelitis, while one died of an enteric disturbance nine days after inoculation. When a further test was carried out twenty-three days after the treatment, the one monkey remaining developed typical poliomyelitis.

More or less long protection also seems to be afforded by 1 per cent trinitrocresol; by 1 per cent silver nitrate (two monkeys protected two, twenty-three and forty-four days); by 5 per cent protoargentum; by 10 per cent argyrol; by 2 per cent erythrosine; by 1 per cent neutral acriflavine; by 1 per cent zinc sulfate (three monkeys protected two, twenty-three, forty-four and sixty-eight days).

Three monkeys were protected by 1 per cent thionin for at least twenty-three days; two of these died of an enteritis, one twenty-one days and one twenty-two days after the second virus inoculation. The remaining monkey has resisted virus inoculation forty-four, fifty-eight and seventy-nine days after the original thionin treatment.

Three monkeys treated with 0.5 per cent thionin resisted virus instillation two days later. One died of an enteritis twenty-nine days after the virus inoculation. The two remaining monkeys have resisted inoculation twenty-three, forty-four and sixty-eight days after treatment.

Little or no protection was afforded by 1 per cent ammonium picrate, 1 per cent congo red, 1 per cent trypan blue, 1 per cent sodium fluorescence (uranin), 1 per cent trypan red, 1 per cent eosin yellowish, 0.25 per cent mercurochrome or 10 per cent normal monkey cord.

IN CONCLUSION

It is apparent that the protected animals eventually will develop the disease in the absence of continued chemical treatment, provided the virus inoculations are continued for a sufficiently long period of time.

A total of 112 controls served in carrying out these studies, 84.8 per cent of which have developed poliomyelitis.

While various chemical compounds are more or less effective in protecting monkeys against intranasal inoculation with poliomyelitis virus, it does not follow, of course, that all of these are equally applicable to man. Of those we have studied thus far, 1 per cent picric acid in physiological saline seems in general the most suitable; not only because its effectiveness has been quite definitely established, but also because it is, in itself, essentially harmless and comparatively nonirritating. We would suggest that the solution be applied with an atomizer on three successive or alternate days, and thereafter once every week or ten days during the period of an epidemic. Since the solution should be thoroughly applied to the olfactory area, it is desirable to have the treatments carried out under the supervision of a competent nose and throat specialist, who would consider the anatomic conditions which might ordinarily interfere with making the necessary contact with this area.

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REFERENCES

1. Schultz, E. W., and Gebhardt, L. P.: Proc. Soc. Exper. Biol. and Med., 31:728, 1934.

2. Brodie, M., and Elvidge, A.: Science, 79:235, 1934.

3. Lennette, E. H., and Hudson, N. P.: Proc. Soc. Exper. Biol. and Med., 32:1444, 1935.

4. Schultz, E. W., and Gebhardt, L. P.: J. Pediat., 6:615, 1935; ibid., 7:332, 1935.

5. Schultz, E. W., and Gebhardt, L. P.: California and West. Med., 43:111, 1935.

6. Olitzky, P. K., and Cox, H. R.: J. Exper. Med. 63:109, 1936.

7. Hudson, N. P., Lennette, E. H., and Gordon, F. B.: J. A. M. A., 106:2037, 1936.

8. Olitzky, P. K., and Cox, H. R.: Science, 80:566, 1934.

9. Armstrong, C.: Pub. Health Rep., 50:43, 1935.

10. Armstrong, C., and Harrison, W. T.: Pub. Health Rep., 50:725, 1935.

11. Sabin, A. B., Olitzky, P. K., and Cox, H. R.: Proc. Soc. Am. Bact., J. Bact., 31:35, 1936; J. Exper. Med., 63:877, 1936.

12. Schultz, E. W., and Gebhardt, L. P., Proc. Soc. Exper. Biol. and Med., 34:133, 1936.

13. Armstrong, C., and Harrison, W. T., Pub. Health Rep., 51:203, 1936.

HEAT PRODUCING APPLIANCES: THEIR COMPARATIVE VALUE IN THE TREATMENT OF PROSTATIC INFECTIONS*

By James B. Herring, M. D.
San Francisco

Discussion *by Norman N. Epstein, M.D., San Francisco; Robert V. Day, M.D., Los Angeles.*

RAISING the temperature of the prostate has therapeutic value. I believe most, if not all of us, will subscribe to that statement. It leaves only the question as to what is the best method of producing the heat.

METHODS OF TREATMENT

The fact that there are so many types of treatment is evidence that a satisfactory method has not been evolved. Massage, irrigation, dilatation and posterior urethral instillations have been used, but with varied and not entirely satisfactory results. Vaccines, injections of various types, and numerous appliances have been employed. The keystone has been digital massage, a thoroughly unscientific procedure, but so far, the best. Acceptable conclusions, however, have never been reached, because they have been based on "cure," and the time consumed in producing cure, when we have no entirely agreeable method of determining when cure has been produced.

METHODS OF DETERMINING CURE

By signs.—Examining prostate rectally, most of us feel, is unreliable. Tenderness and, especially, induration, are probably the best signs, but influenced too much by a patient's neurogenic make-up. Urethroscopic examination is of some advantage, but few could use it as a method of determining when a prostate is healed. This leaves only microscopic examination of expressed fluid upon which we may base our conclusions; but here figures are only arbitrary, each teacher having his own standard.

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* Read before the Urology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

By symptoms.—A patient will draw conclusions of cure from his freedom of symptoms, but a practitioner who bases scientific conclusions on statements which are so easily produced by psychic reactions, is treacherous to the principles of his profession.

The term "cure" can offer no basis for proof of therapeutic virtue. Definition of what is meant by "cure" varies widely in the minds of different men. A case considered cured by one man would still be under treatment by another. Unfortunately, prostatic massage is painful. Some urologists being too gentle, fail to squeeze pus from the obstructed prostatic tubules, and consider the patient cured, while others would find pus in the case. This causes a disagreement as to time required for treatment, some saying that three months should be sufficient, while others say six years to life.

This unreliability of established cure has allowed us to drift away from facts. It has increased our susceptibility to colorful statements of manufacturers and salesmen of all manner of prostatic machines, and has produced a gullibility that gives credence to testimonials from any and all sources. This is well demonstrated in articles about the Elliott machine found in the *Ladies Home Journal, Country Gentleman* and outstanding medical periodicals.

Therefore, to avoid these errors, we should discard second hand conclusions and go back to first principles of scientific research. Raising the temperature of the prostate has definite therapeutic value. The value of any type of heat-producing equipment must not be judged by its ability to *cure*, but only by its ability to *produce heat.*

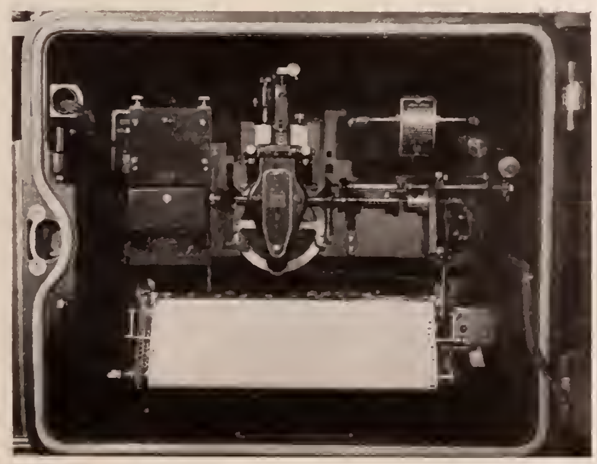

Fig. 1.—A Leeds and Northrup temperature recorder with Micromax mechanism.

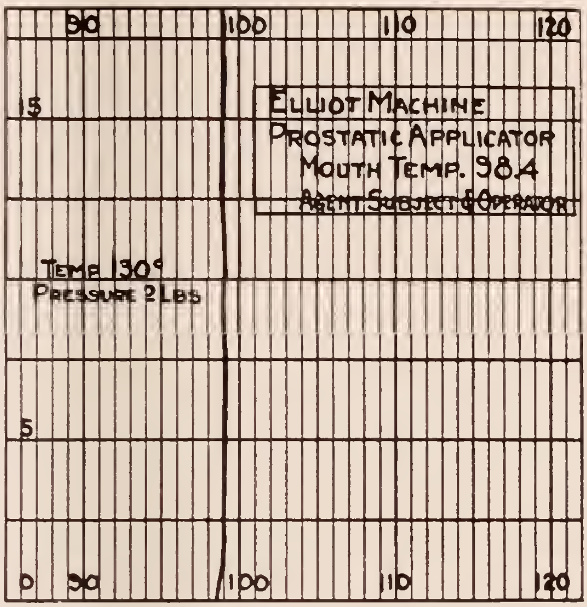

Fig. 2.—An Elliott machine salesman treats himself for prostatic infection; maximum temperature in the prostate, 99 degrees.

I will demonstrate this last fact by charts. These charts have been constructed by a curve-drawing potentiometer connected to a thermocouple placed in the posterior urethra during treatment. The recording device is guaranteed accurate to three-tenths of a degree Fahrenheit. The charts are consequently free from error, either mechanical or such as might be due to the "personal equation," for there are no readings made by the operator.

HOT WATER THERMAPHORE

This familiar instrument has been used for generations, and still is widely used in nearly every hospital in the country for the treatment of painful prostatic conditions associated with swelling. We found that the water, at 122 degrees, was sufficiently hot to burn the rectum, but not to change the temperature in the posterior urethra. Consequently the relief of pain when obtained by *this* method must be due to the effect of counter-irritation.

THE BRANSFORD-LEWIS HEATER

This instrument is an infra-red type of prostatic heater. A study of the chart shows that if there is any effect from its use, other than counter-irritation, then it must be psychic therapy, for there is no more rise of temperature in the prostate than might be produced by a mustard foot-bath. In order to check the recording device, diathermy was applied, and the rise in temperature demonstrated that at least the recording device was working.

ELLIOTT TREATMENT

The utter simplicity of a chart made while using this machine should, perhaps, be explained. It is the graph recorded when what should be called the Elliott Motorized Hot Water Bag was used. If you fail to see any appreciable variation in the

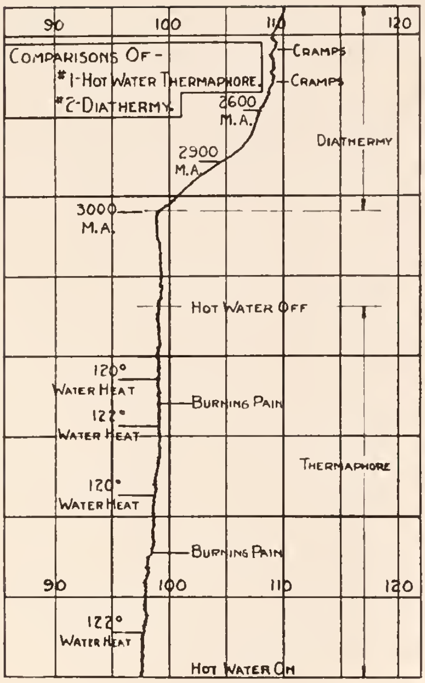

Fig. 3

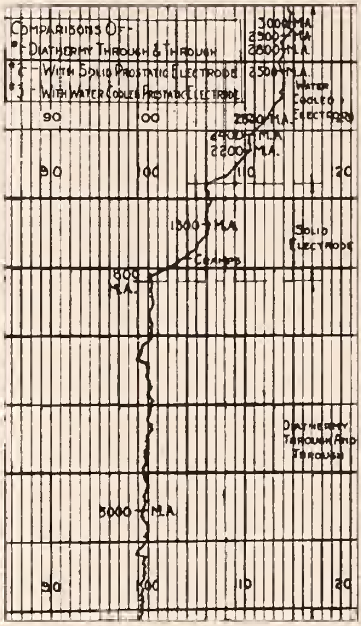

Fig. 4

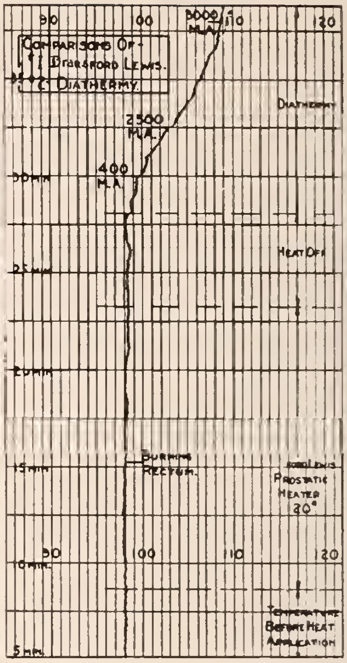

Fig. 5

Fig. 3.—Comparative temperatures obtained with a hot water thermaphore and diathermy used successively on the same patient, 99 degrees and 109 degrees respectively.

Fig. 4.—Diathermy treatment of the posterior urethra. With ordinary rectal electrode a temperature of 107 degrees was recorded; with a water-cooled electrode the heat was increased to 115.5 degrees.

Fig. 5.—The Bransford-Lewis prostatic heater raised the temperature in the organ only a fraction of a degree. Diathermy applied to the same patient produced 109 degrees.

line drawn by the recording instrument, it is because there was no change in heat.

In thirty minutes' time the temperature rose to 98.5 degrees. In view of the fact that the representative of the manufacturer gave this treatment to himself, the method cannot be at fault. He had told hundreds of doctors that by the use of this equipment he had cured his prostatic infection. However, a check which I made on his condition demonstrated an acutely infected prostate existing, causing me to doubt the completeness of his self-styled cure. Another example of how false conclusions are often based on supposed cures. I wonder how many of the other advertised Elliott cures are of the same type!

CONCLUSIONS CONCERNING HEAT BY CONDUCTION

That heat cannot be conducted through living tissues in appreciable amounts is demonstrated by these charts. Although the temperature in the rectum was raised to the tolerance of the rectal mucosa, there never was demonstrated any temperature rise in the posterior urethra.

Caulk applied on actual cautery to living tissues and found that it required nine seconds or more to produce any heat at a depth of as little as four-tenths of a centimeter. My own observation invariably has been that human tissue is a mighty efficient insulator.

RADIO FREQUENCY

Radio frequency was used in an attempt to heat in a condenser field. An insulated electrode was inserted in the rectum with a condenser-pad externally applied, and was found to be absolutely impractical because of the intense heat produced within the orificial electrode itself, almost immediately burning the rectal mucosa.

When two condenser pads were placed externally, it was possible to show an elevation of about one degree. We used seven different makes of apparatus to conduct these experiments, and arrived at the same conclusions as Bernard Mortimer and Stafford L. Osborne, who recently reported that three out of six machines tested were worthless. Using thermocouples in internal organs, they found that organs outside of the condenser field heated to the same degree as others within the field; also that there was a gradient of temperature from the skin inward even more marked than when ordinary diathermy was used—a fact which our experiments corroborated.

I believe that time will demonstrate that radio frequency is to be compared with ordinary diathermy, its only advantage being its possible ease of application, while its disadvantages will be those of increased difficulties in localizing its effects because of increased voltage.

ADAPTATION TO PROSTATIC HEATING

There is a way, however, to adapt radio frequency to prostatic treatment, making it compare favorably to diathermy. If the usual bare type of orificial electrode is inserted in the rectum without insulation, and this electrode is connected to one side of a condenser of proper capacity (the other side being connected to the radio frequency machine), then with the usual insulated pad placed on the abdomen, the treatment may be given effectively, concentrating the heat where it is desired.

DIATHERMY

The first portion of this chart records temperatures produced by diathermy in the posterior urethra with pads over the buttocks and over the lower abdomen, using as much as 5,000 milliamperes of current. There is practically no indication of deep heat. The second portion shows that by using a rectal prostatic electrode of the usual type, a temperature of 106 degrees was reached. In the final section of the chart the unusual is seen. The highest temperature ever recorded in the living human body was when the recording needle drew the temperature line well above the 115 degree marker. In order to produce locally this high temperature with diathermy, I found it necessary to design a special rectal electrode which is water-cooled, thus allowing an increase of 50 per cent in the amount of current used. In practically every patient treated, we have been able to produce a temperature of from 109 to 112 degrees, and maintain it for as long a time as desired.

CONCLUSIONS CONCERNING HEAT BY HIGH FREQUENCY CURRENTS

Radiothermy is, in our experience, merely a less efficient form of diathermy, and must be localized with orificial electrodes to produce local effects.

Diathermy as well as radiothermy has little deep effect when given with external pads or condensers. Either one applied with orificial electrodes will heat the prostate, the temperature increase being limited by the tolerance of the rectal mucosa.

When a water-cooled electrode is used, diathermy increases prostatic temperatures up to the tolerance of prostatic tissue. Since the electrode remains cold, the tolerance of the rectal mucosa is no longer a factor.

In general hyperpyrexia authorities agree that a temperature of from 106 to 107 degrees for three hours is necessary to obtain results which seem to be due to the action of the heat itself directly on the invading organism. Many have felt that improvement was due to some vague systemic change producing immune bodies in the tissues. This theory has never been substantiated, and that it is in error, on the other hand, has been demonstrated to the satisfaction of most clinicians.

The blood of a hyperpyrexia patient has not been shown to possess any increase in specific resistance. Epstein and Cohen have established abundant proof that it is the actual temperature for a definite time interval that brings about the death of the Treponema pallida, whether in the test tube or in the body tissues. They reported a case of generalized maculopapular eruption with moist papules over the vulva, mucous patches in the mouth and infiltrated papules over the forehead. All the lesions except those on the forehead cleared rapidly under fever treatment. This phenomenon is not unusual and is easily understood when we realize that the skin of the face remains relatively cool during any type of fever therapy.

In view of the fact that the greater part of the good effect obtained from general hyperpyrexia comes from the temperature itself, it is not necessary to raise the temperature of the entire body in order to treat pelvic conditions. We can raise local temperatures by methods just given and maintain them with safety. This safety factor is important when, in our own vicinity, there have been two deaths due to general hyperpyrexia.

SUMMARY

Such appliances as hot water irrigators, the Elliott machine, and other infra-red generators used to heat by *conduction,* fail to produce heat in the prostate. On the other hand, high frequency, ultra high frequency, or ordinary diathermy, with proper orificial electrodes, are of value, and the greatest elevation of temperature is obtained with the use of a water-cooled electrode.

490 Post Street.

DISCUSSION

Norman N. Epstein, M.D. (450 Sutter Street, San Francisco).—Doctor Herring has suggested an excellent method of producing high temperatures locally within the prostate. As my knowledge of prostatic infections is limited, I shall confine my discussion to the subject of general hyperpyrexia. The production of general hyperpyrexia is a much different problem from the elevation of the temperature of tissues in a localized area. An artificial fever can be produced by preventing radiation of heat from the body surface through simply wrapping the patient carefully in blankets and adding some source of external heat. Using this method, it was observed that the general body temperature rose gradually to the desired height—that is, from 104 degrees Fahrenheit to 106 degrees Fahrenheit.

The exact mechanism through which artificial fever produces therapeutic results is not entirely known. There are probably several factors involved. There is a direct effect upon the causative organism and an effect also upon general body and tissue resistance. There may be other effects which at present are not fully understood.

While it is logical that general hyperpyrexia should be used only in systemic infections, yet it may be of value in certain local pathological processes. We observed that general hyperpyrexia was of great value in the treatment of gonorrheal arthritis limited to one or two joints. Beneficial results have been reported on the use of artificial fever in gonorrheal urethritis. Further work is necessary to determine whether general hyperpyrexia is of value in the treatment of prostatitis and other infections of the genito-urinary tract.

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Robert V. Day, M.D. (1930 Wilshire Boulevard, Los Angeles).—It is a delight to be able to read and review such a sound exposition of this subject, backed up by comprehensive clinical observations and checked by reliable physical methods of precision. There has been nothing left to guess-work or personal equation, wherever this has been avoidable. Doctor Herring's report tells us authoritatively just what heat effect we may expect from each type of machine or apparatus in the way of producing a rise of temperature in a more or less localized and circumscribed area.

Just what and how much may be accomplished by the application of heat to a given area, is the subject of considerable controversy. Every clinician has observed its benefits in a certain percentage of inflammatory conditions, especially in the presence of inflammatory exudate. Whether or not it is the best practice to start the heat treatment prior to the peak or crest of the inflammatory process, is perhaps debatable. Certainly, however, there comes a time when localized heat hastens resorption of inflammatory exudates and promotes natural drainage through excretory ducts, provided that the trauma incident to the application of heat therapy does not counterbalance the benefit. Specifically, I mean that with a fairly acute prostatitis where the tender inflamed prostate bulges well into the rectum, the introduction of an electrode well up into the rectum often produces much local distress, to which the physician all too often pays not the slightest note, having previously made up his mind that it possessed great therapeutic merit and should be employed regardless of the fact that ofttimes it is severe punishment to the patient and tends rather to retard than to hasten a cure. Even the hot water thermaphore often causes great discomfort in cases where the bulging prostate is much pressed upon. Manipulation of, and pressure on, an acutely inflamed prostate is just as illogical as squeezing or pressure on a tonsil in a patient with acute follicular tonsillitis, and in practice a really intelligent patient resents any kind of pressure or manipulation on an acutely inflamed prostate. All these electrodes are almost certain to do just that.

With chronic conditions heat locally applied may be of considerable value; but, after all, it is only one factor in the therapeutic management. Certainly no one has brought forth any worth while evidence that the beneficial effects of heat in this area is the result of any bactericidal action of heat. Obviously such notions are only the result of wishful thinking. While the beneficial effects are undoubted, this is effected in all probability through hyperemia, the hastening of absorption of exudate, promotion of drainage through the ducts, both by reason of the hyperemia and the pressure of the electrode on the prostate.

My more limited clinical experience tends to exactly bear out Doctor Herring's conclusion as to the comparative efficiency of the several types of machines. Doctor Herring, in passing, refers to the criterion of cure. I should like to emphasize that such criteria should always be based on every fact relative to a given case, including subjective symptoms, physical findings and laboratory data.

Finally, the local application of heat to the prostatic area is only one of the various agents of proven value in the treatment of inflammations and infections of the prostate and seminal vesicles. The great criticism, concerning many types of physiotherapy, is that their advocates too often manifest an altogether too exaggerated notion of their efficiency, to the neglect of other proven and recognized forms of therapy. Heat at best, no matter how applied, is only an adjuvant, not a cure-all. If we recognize its limitations as well as its great value, and prescribe it intelligently without expecting miraculous results to follow in every case, and at the same time display judgment in the selection of machines, such as Doctor Herring has done, we may give much satisfaction to our patients and ourselves by its employment.

A Final Warning.—Only in the occasional case which fails to respond to more moderate measures, should we resort to ultravigorous massage or an extreme degree of heat to the region of the prostate. Otherwise, there will be many flare-ups resulting in subacute prostatitis and even epididymitis, sometimes becoming quite acute. Clinically such observations are not infrequent. One should resist a certain human tendency to argue that if a little is good, more is better!

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Doctor Herring (closing).—We are in full accord with Doctor Epstein's statement that the mechanism of producing therapeutic results in artificial fever is not known. Recent work, however, more and more is tending to prove that it is the heat alone that produces the therapeutic results, and not some vague unknown secondary factor. Based on this conclusion, I have been applying heat in known amounts to local parts.

I appreciate Doctor Day's appraisal of the work as outlined in my paper. I agree with him that acute conditions of the prostate should not be handled by rough massage and unknown quantities of heat. It was because of this fact that I designed an electrode shaped and water-cooled to minimize traumatization, and have recorded temperatures so that no haphazard procedure need be employed to an organ so susceptible to violent adverse reactions. Under these controlled conditions I have had no complications, and have not hesitated to treat a prostate with heat, in the face of most acute infections. However, I should say here that in the acute stages of gonorrhea, I do not use this method.

CLINICAL STUDIES WITH PROTAMINE-INSULIN

By Bertnard Smith, M.D.
Los Angeles

INTRODUCTION.—A large amount of investigative study in the last ten years has been directed to the problem of slowing the rate of insulin absorption after injection into the subcutaneous tissues. This work has been stimulated by the difficulties found in maintaining a satisfactory control in many diabetic children, and in diabetic adults of the more severe forms, where blood sugar values may range in twenty-four hours from a dangerously low figure to an extreme hyperglycemia. The first evidence of possible success in solving this problem was in the reports from the Steno Memorial Hospital of Copenhagen [1] on the studies with protamine insulinate, and the later publications from the same institution [2] and from the George F. Baker Clinic of Boston.[3]

PROTAMIN BUFFER: METHOD OF HAGEDORN OF COPENHAGEN

Early in this year the Eli Lilly Company began supplying a preparation of iletin with protamine buffer, using in preparation the methods of Doctor Hagedorn of Copenhagen. This protamine-insulin is distributed for clinical studies with the same generosity, and in the same spirit, as was shown by this company in 1922 with insulin. This report is concerned with clinical observations on twenty-five diabetic patients who have been using the Eli Lilly protamine-insulin for sufficient time to justify some conclusions as to the early effects. The results of similar studies have recently been published by Dr. R. M. Wilder,[4] of the Mayo Clinic, Dr. E. P. Joslin,[5] and Kerr, Best, Campbell and Fletcher [6] of Toronto.

REPORT OF CASES

Cases 1 and 2.—The first patients selected for the studies now presented were two children, twin sisters, with the onset of diabetes in January and October, 1931. Both have been under observation in this clinic since diabetes was found. Both have been frequently hospitalized in the five years for acute complications. One had eleven admissions in five years and the other thirteen. Both had been taking diets of the same values, for a number of months before this study was begun, with insulin given four times in each twenty-four hours. These patients were held in the hospital for three months, with daily urine analyses and frequent blood sugar studies. Table 1 gives some of the significant results of urine analyses for the collection periods. In this table the designated day indicates the interval following change in dosage of regular insulin (R-I) or of protamine-insulin (P-I).*

Chart 1 shows a comparison of the blood sugar curves with regular insulin and with protamine-insulin. Curve 2 was obtained soon after an acute head cold, and before the morning dose of protamin insulin had been reduced to 20 units. The sister of this patient has had a record so similar as to make any detailed report almost a duplication.

Acute complications and breaking diets can cause sharp loss of diabetic control in both patients, but the even control possible with the protamine-insulin gives greater possibilities for increased resistance to infections and better possi-

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* For convenience, regular insulin in this report is designated as R-I, and protamine-insulin as P-I.

Table 1.—*Glycosuria. Child*

Age 8½ years Diet: C. 150, P. 60, F. 60 Insulin: 14-4-8-6

Time:	7:00 A. M.-N.		N.-7:00 P. M.		7:00 P. M.-M.		M.-7:00 A. M.		
	Vol.	Gms.	Vol.	Gms.	Vol.	Gms.	Vol.	Gms.	Dosage
Day									
	650	3.9	550	tr.	650	4.2	240	6.8	R-I 14-4-8-6
1	400	16.0	550	7.7	650	7.2	350	5.8	R-I 14-4-0-0
2	650	25.4	250	6.2	720	25.8	180	8.4	P-I 14 at 3:30 P. M.
4	400	0.	275	4.7	110	0.	400	10.0	
1	550	3.8	150	0.7	450	2.7	550	18.1	R-I unchanged
4	500	tr.	300	0.	150	3.3	200	4.6	P-I at 4:30
1	1,000	37.0	600	24.0	150	1.5	200	1.0	P-I at 6 P. M.
8	550	18.1	650	3.9	350	tr.	250	7.0	
1	600	3.0	600	11.4	400	5.6	No specimen		R-I stopped
3	200	3.6	500	tr.	310	2.4	300	0.	P-I 20 at 6 A. M. 16 at 5 P. M.
75	280	0.	200	0.	280	0.	340	0.	

bilities for normal development than could be secured with such blood sugar curve as seen in 1 of the chart. In the summary of urine analyses of Table 1, protamine-insulin given at 3:30 p. m. does not give as satisfactory control of glycosuria as does the 4:30 time. The same is true when the protamine-insulin was given at 6 p. m. When all regular insulin was stopped and protamine-insulin was given twice daily, there appeared definite increase in glycosuria and urine volumes when the interval between morning and evening doses was changed. The best control was manifest when injections were given from eleven to twelve hours apart. When this interval between injections was observed, the meal times for breakfast and supper were changed, and no increase in glycosuria occurred when protamine-insulin was given before, with or after the morning and evening meals. In all other patients who have been taking the protamine-insulin it has been routinely advised to fix a definite time for the injections with a twelve-hour interval, with the morning and evening meals within an hour before or after taking the insulin.

ON DISTURBED CONTROL

Table 1 also indicates the disturbed control that frequently follows the change from regular insulin to protamine-insulin and the increased glycosuria that may persist from two to ten days after even slight changes in the time of protamine-insulin injections. This sensitiveness appears to be much more pronounced in those patients who have been using regular insulin for some time than in new or mild diabetic patients who have never taken insulin. It is possible that a glycogenic function that has become somewhat adjusted to the more acute effect of regular insulin may be slower in adaptation to the more gradual effect of the protamine preparation.

REPORT OF CASES

Case 3.—Chart 2 shows blood sugar curves in an adult patient at the beginning and the end of a hospital study of three weeks. The tolerance gain is marked for this short time, especially when it is known that the patient entered the hospital before full recovery from an acute ketosis. Diabetes was of seven years' duration and control has always been very irregular. Full control is main-

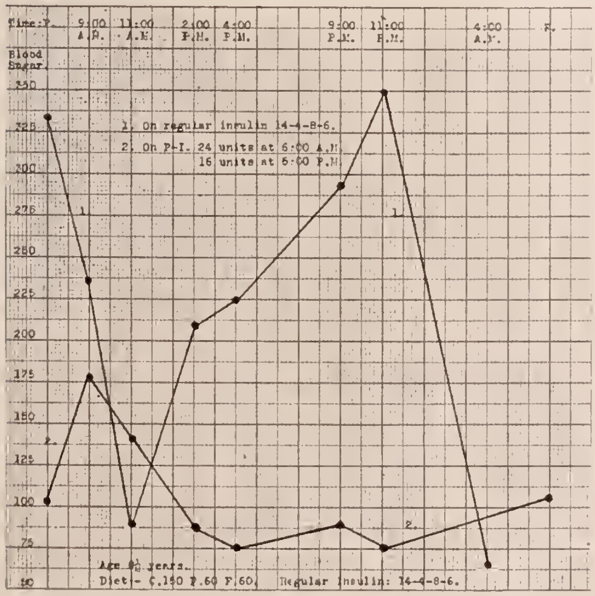

Chart 1

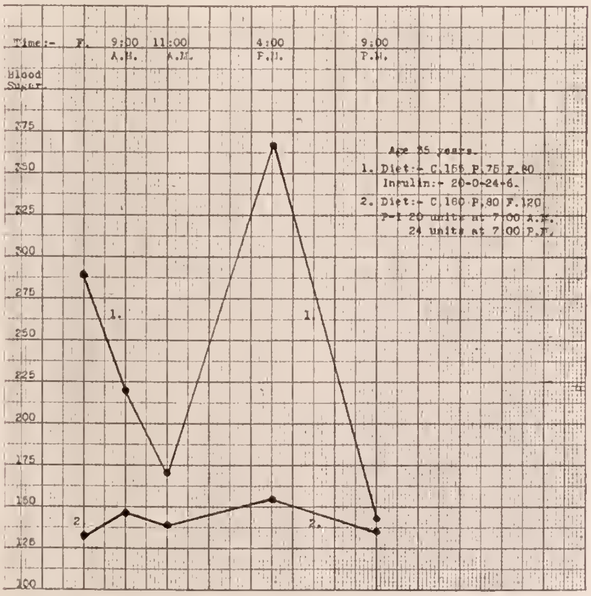

Chart 2

TABLE 2.—*Glycosuria. Adult*

Time:	7 A. M.-7 P. M.		7 P. M.-7 A. M.		
	Vol.	Gms.	Vol.	Gms.	Dosage
Day	1,825	32.8	1,100	12.2	Diet: C. 155, P. 75, F. 80 R-1 20-0-24-6.
1	3,100	122.0	1,000	38.0	
2	850	60.3	650	0.	R-I 20-0-0-0.
3	1,300	7.8	1,200	7.6	P-1 24 at 6 P. M.
4	1,200	6.0	1,650	0.	
7	1,400	0.	1,300	0.	
1	1,400	7.0	1,500	7.5	R-1 stopped.
2	1,400	0.	1,300	0.	P-I 22 at 7 A. M.
3	1,600	0.	1,300	0.	24 at 7 P. M.
5	1,450	0.	1,160	0.	Diet: G. 180, P. 80, F. 120
8	1,340	0.	1,020	0.	
10	1,300	0.	500	0. (Home)	P-I 20 units 7 A. M. 24 units 7 P. M. Leaves hospital

tained since this patient left the hospital. Table *2* again shows the increase in glycosuria that immediately follows any change in insulin, either in unit dosage or time.

The clearing of marked periodic fatigue and improved endurance in the ten days since discharge from the hospital are mentioned by the patient as marked change in symptoms. There is evident improvement in nervous stability and this is probably due to the more evenly maintained blood sugar.

* * *

Seven patients with some cardiovascular complication are included in this group. In all of these the cardiovascular condition developed from one to fifteen years after the onset of diabetes. The ages of the seven patients range from 52 to 75 years. All have required insulin for several years, and diabetic control has been impossible even when insulin was given from three to six times daily.

ON INCREASE OF GLYCOSURIA WITH INSULIN CHANGE

An increase in glycosuria with each insulin change is seen in Table 3. This appears to clear as gradually in a patient of seventy-two years as in a patient of eight and one-half years. The afternoon dose of protamine-insulin was taken after the evening meal during the time this patient was in the hospital, which is the time covered by the data of Table 3.

COMMENT ON PATIENT GROUPS

Three patients of the seven with cardiavascular complications were able to hold full diabetic control on one dose of protamine-insulin, when regular insulin had been taken in two to four doses previously. Loss of early morning or late afternoon fatigue, increased general strength and clearer vision are symptoms most frequently given by this small group after the change from regular insulin to protamine-insulin. Some reason for this is seen in the blood sugar values as follows:

Age 70. Diabetes since 1932. Angina since 1935. Diet: C. 150, P. 60, F. 100.

After one month on protamine-insulin with dosage sixteen units morning and twelve units afternoon. Former regular insulin, 20-6-12-8.

Blood Sugars	Fasting	9 a. m.	11 a. m.	5 p. m.
	175	188	172	168

One patient who went to work after school was out in June had to change his routine of meals and protamine-insulin injection time. Working from 3 p. m. to midnight required him to have breakfast late each morning and supper at 1 a. m., after returning from work. He had been taking protamine-insulin twice daily and had held a fairly even diabetic control when attending school. Night-frequency returned and also high blood sugar values with glycosuria of high percentage. By taking regular insulin at 1 a. m. and protamine-insulin at 9:30 a. m. before breakfast, he has been

TABLE 3.—*Glycosuria. Cardiac*

Diet: C. 150, P. 60, F. 120

Time:	7 A. M.-7 P. M.		7 P. M.-7 A. M.		
	Vol.	Gms.	Vol.	Gms.	Dosage
Day	860	13.7	1,300	20.8	R-I 18-0-14-4.
1	600	0.	1,200	13.2	R-I 18 -0-0-0.
2	1,300	9.8	1,200	9.6	P-I 18 at 6:30 P. M.
1	900	18.0	1,150	20.7	R-1 stopped.
3	750	16.5	850	14.4	P-1 20 units A. M. and P. M.
5	500	2.5	1,000	5.0	Time 6:30.
6	400	0.	800	4.0	
1	400	0.	850	4.2	P-1 24 Units A. M.
4	800	0.	750	1.5	16 units P. M.
8	820	0.	760	0.	

Age 72 years. Onset of diabetes June, 1926. Began insulin in February, 1928. Chronic myocarditis. Sclerotic aortitis. First cardiac symptoms, 1934.

able to maintain satisfactory control and continue at work. This patient had night polyuria that lasted for about twelve hours after he first began taking protamine-insulin. Another patient, age twenty-four years, had a sharp ketosis immediately following the first dose of protamine-insulin. This cleared completely in about fourteen hours without any additional insulin. Three other patients have had acute diabetic symptoms for twelve to thirty-six hours after the first injection of protamine-insulin, and all have lost these symptoms without increasing the unit dose of protamine-insulin or taking regular insulin. Two patients had symptoms of hypoglycemia following the first evening injection of protamine-insulin. With one patient the symptoms began about 4 a. m., several hours before the injection of regular insulin was due. The second patient experienced hypoglycemic symptoms two hours after breakfast. These were evidently influenced by the morning dose of regular insulin. These symptoms continued more or less severe until about 9 p. m. even with extra carbohydrate taken during the day to at least 80 grams.

* * *

Eight patients were never able to come under satisfactory control with plain protamine-insulin during several weeks of close observation. Blood sugars were maintained at a more even level, but held values of 200 to 300 milligrams, with high percentage of glycosuria. Since protamine-insulin in combination with either zinc or calcium has been available, these patients have responded with more satisfactory control. The studies of Scott and Fisher[7] on the effects of giving diabetic dogs protamine-insulin combined with small amounts of zinc, and the experimental and clinical studies reported by Kerr[8] indicate a longer insulin effect with zinc than was found with protamine-insulin alone. During the short time that the Lilly preparations, that combine either zinc or calcium with protamine-insulin, have been available, there has been an increasing amount of evidence that these combinations give insulin effects of longer duration than has been found with plain protamine-insulin solutions, with less diabetic disturbance at the beginning of the treatment or with any change either in unit dosage or in time of injection. Which of the two preparations, zinc or calcium, is the more stable and will give the longer insulin yield is now being studied. The blood sugar curve of Table 2 gives evidence of the degree of diabetic control possible with calcium protamine-insulin.

* * *

But two patients of the twenty-five here reported have continued to take regular insulin for one period of the day. One takes this for the morning insulin and the other for the late night dose. Several patients of this group studied had to change back to the regular insulin for several days. This shift was made without disturbance, and the later change back to protamine-insulin caused none of the evidence of loss of diabetic control that appeared earlier.

IN CONCLUSION

1. Those diabetic patients who have used regular insulin for some time before beginning protamine-insulin often show an acute diabetic disturbance that may last from three to five days. Loss of control to some degree may immediately follow any slight change in unit dose, or in time of protamine-insulin injection. Failure to secure satisfactory control with the new insulin may result from frequent changes in time of injection or in unit dose.

2. In the group of patients now reported, it was found that the protamine-insulin had a unit value somewhat less than U-40. Usually four to eight units more were required with the protamine-insulin solution. Since the zinc and the calcium combinations have been used there is evidence that these are more nearly the same in unit value as regular insulin of U-40 strength.

3. Observations indicate that an interval between protamine-insulin injections of twelve hours gives satisfactory results, rather than giving the dose in relation to meals.

4. Change from protamine-insulin to regular insulin and back again to the protamine can be done without serious disturbance in control.

5. All patients have expressed a feeling of increased endurance and relief of periodic fatigue soon after beginning protamine-insulin, even before satisfactory control is obtained.

6. Hypoglycemia may be difficult to correct because of the continued absorption of insulin, and may appear at the beginning of the change to protamine-insulin, when regular insulin is taken at one or more periods. Subnormal values for blood sugar may be found without definite symptoms. This may require more frequent blood sugar tests, especially in patients with some cardiovascular complication. The more even blood sugar control should give greater safety for these patients in that there should not be the rapid drop in blood sugar that was occasionally found with regular insulin.

7. Patients using protamine-insulin should be warned of the necessity of keeping the preparation in the icebox after mixing, and to shake the bottle before each withdrawal of dose.

8. The combinations of insulin with protamine buffer, together with either zinc or calcium, give a more even blood sugar control throughout the full twenty-four hours than has been possible with regular insulin alone in the severe diabetic. Clinical observations for longer time will give the full picture of value for these new preparations, but the controls secured in the months they have been used offer great hope for the future.

1930 Wilshire Boulevard.

REFERENCES

1. Krarup, N. B.: Clinical Investigation Into the Action of Protamine-Insulin, G. E. C. Gad., Copenhagen. 1935.

2. Hagedorn, H. C., Jensen, B. N., Krarup, N. B., and Woodstrup, I.: Protamine Insulinate, J. A. M. A., 106:177, 1936.

3. Root, H. F., White, P., Marble C., and Stolz, E. H.: Clinical Experience with Protamine Insulinate, J. A. M. A., 106:180, 1936.

4. Wilder, R. M., Sprague, R. G., Blum, B. B., Osterberg, A. E., and Kepler, E. J.: Clinical Observations with Insulin Protamine Compounds, J. A. M. A., 106:1701, 1936.

5. Joslin, E. P.: Protamine-Insulin, New England J. Med., 214:1079, 1936.

6. Kerr, R. B., Best, C. H., Campbell, W. R., and Fletcher, A. A.: Protamine-Insulin, Canad. M. A. J., 34:400, 1936.

7. Scott, D. A., and Fisher, A. M.: Effect of Zinc Salts on Action of Insulin, J. Pharmacol. and Exper. Therap., 55:206, 1935.

8. Kerr, R. B.: The Action of Protamine-Insulin in Normal and Depabcreatized Dogs, Abst. J. Clin. Investigation, 15:450, 1936.

A NEW APPROACH TO RESECTION OF CANCER OF THE COLONIC FLEXURES*

By Carl L. Hoag, M.D.
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Discussion *by H. Glenn Bell, M.D., San Francisco: Mark Lewis Emerson, M.D., Oakland; Harold Brunn, M.D., San Francisco; John B. deC. M. Saunders, F.R.C.S., San Francisco.*

CARCINOMA involving the splenic and hepatic flexures has too frequently been regarded as inoperable because of the difficulties of resection and the high mortality occasioned by the removal of this portion of the bowel. For this reason many palliative operations have been done. Permanent colostomies are necessary at times, but they have many objectionable features, and should be avoided if reëstablishment of the continuity of the bowel is at all possible without too great a risk.

DIFFICULTIES AND DANGERS OF RESECTION

The difficulties and dangers of resection have been caused largely by the poor exposure through the usual anterior route, making the operation long and subjecting the patient to shock; in addition, the flexures are fixed and inaccessible, the blood supply comes from the posterior wall still farther from the incision, and it is often impossible to remove completely the glandular metastases in the surrounding tissues. If the patient survive the immediate operation, too frequently he is left with a permanent colostomy or fistula, and eventually dies of infection or a recurrence of the disease.

Some of our surgeons argue that a permanent colostomy can be made so inoffensive that it is not objectionable. It is always, however, a source of great care, gives an unmistakable odor however perfectly it may function, and leaves the patient with a physical handicap and mental distress.

We do not hesitate to resect a cancer of the stomach even in the presence of known metastases in the liver, and in spite of a fairly high mortality rate, because, without resection, patients with this lesion lead a miserable existence; on the other hand, if resection is successful they may live fairly comfortably for from one to five years. In my opinion we should adopt a similar attitude toward cancer of the colon.

The transverse incisions through the rectus muscle or the combined rectus and costal incisions have never become popular as a method of opening the abdomen, because of the time consumed in closure and because the wall is weakened in a high percentage of cases due to interference with the nerve supply, or infection. The lumbar incision of Koster,[4] "extending from the tip of the twelfth rib to the anterior-superior spine," approaches the mesenteric vessels from the retroperitoneal space, and gives a fairly good approach to the blood supply but does not give adequate exposure for a rapid and complete excision.

INCISION USED BY THE AUTHOR

I have been using a pericostal-transabdominal incision which parallels the twelfth rib and extends from the lumbar fascia in the back to the sheath of the rectus abdominis muscle in front, at the level of the umbilicus—a modification of the usual incision for exposure of the kidney. Instead of curving downward toward the groin, the incision curves upward around the tip of the twelfth rib, extends to and nicks the sheath of the rectus muscle, but does not transect the muscle itself. If it interferes with the innervation of the musculature at all it is only to a slight degree.

It would seem that this incision should violate every principle of good surgery by dividing both muscle fibers and their nerve supply, which would make herniation inevitable. This, however, is not the case. The recent work of Coyte,[1] and Davies, Gladstone and Stibbe,[2] has shown that the eleventh intercostal nerve does not course directly across the abdomen, as our anatomies have taught us, but first loops downward before entering the rectus muscle just above the umbilicus, and then again turns downward within its fibers. The lower dorsal nerve (subcostal or twelfth nerve) does not follow the twelfth rib, but comes out much lower and nearer the spine, with the ilioinguinal and iliohypogastric nerves, and after looping downward, enters the rectus muscle below the umbilicus and courses downward. This incision is made between and parallel to the eleventh and twelfth nerves, which explains the lack of injury to the nerves and lack of degeneration of the muscles which we have found in actual practice. It may be of interest that this incision was developed and used successfully before the true anatomic arrangement—which explains its anatomic soundness—was suspected.

Formerly we were taught that each segment of the rectus muscle was innervated by a single nerve, and that severance of that nerve would result in atrophy of the corresponding segment. In actual practice, however, this complication was seldom seen. An explanation of this fact is offered in the work of Davies, Gladstone and Stibbe,[2] who stated, in a recent article: "Moreover, any one nerve at the lateral border of the rectus is distributed to two segments of muscle. It is certain, therefore, that the rectus segments do not receive a segmental nerve supply, but that each segment is supplied by three segmental nerves at least." Goinard[3] also suggested that the nerve fibers actually cross the linea alba of the rectus muscle. So far this lacks proof.

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* From the Department of Surgery, University of California Medical School.

Read before the General Surgery Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

TECHNIQUE OF OPERATION

A table with a kidney lift is necessary for this procedure. The patient is placed on his sound side with the leg on that side extended, the other leg flexed, the body tilted slightly backward and the back supported on sand bags. This position is the reverse of that used for exposure of the kidney. The skin incision extends from the juncture of the twelfth rib with the spine, to the outer border of the rectus muscle at the umbilicus. The external and internal oblique and transversalis muscles are divided without regard for the direction of their fibers. The anterior portion of the latissimus dorsi muscle is transected and the lumbar fascia divided. Anteriorly, the incision extends into the fascia of the rectus muscle, and the anterior and posterior leaves are partially divided. The nerve supply entering the rectus muscle is readily seen and avoided. The peritoneum is opened widely and the kidney lift is elevated. This, the elevation of the kidney lift, is the most important single step of the operation, for it is the means by which adequate exposure is secured. It more than doubles the normal distance between the twelfth rib and the iliac crest by opening the incision like the spreading of a mouth, and at the same time it tilts the costal margin upward, bringing the colon with its flexure into view. The intestines fall away and seldom show any tendency to bulge out of the wound, so that packs are required only for walling off the intestinal cavity. The space is, in fact, so wide that a Balfour retractor spread to its greatest extent will not remain in position.

On the right side this incision allows ready access to the cecum, ascending colon, hepatic flexure and the right half of the transverse colon. On the left side it exposes the descending colon, splenic flexure and the left half of the transverse colon. It permits a fair exposure of the spleen.

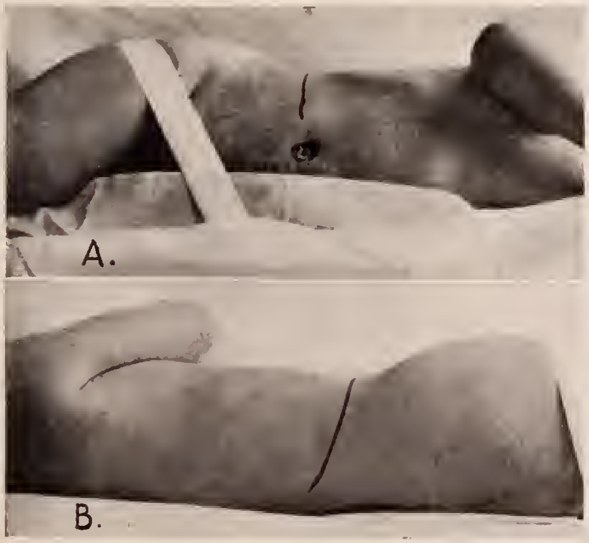


Fig. 1.—Position of patient on table, back supported by sand bags. Line of incision. (Kidney lift is raised *after* incision is made.)

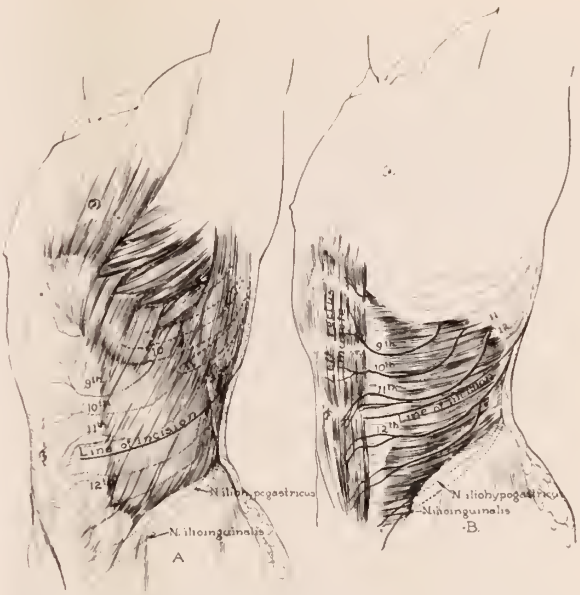


Fig. 2.—Course and distribution of the abdominal nerves. Line of pericostal-transabdominal incision between eleventh and twelfth nerves.

According to Ewing's statistics of 297 cases of carcinoma of the colon, exclusive of lesions of the rectum, the following disposition was found: cecum, 47; ascending colon, 22; hepatic flexure, 19; transverse colon, 44; splenic flexure, 31; descending colon, 10; sigmoid colon, 124. Of these, at least 129, or 43 per cent, could best be approached through the incision described.

The great majority of malignant lesions of the colon are not diagnosed as such, nor are they localized until obstruction occurs. Once the lesion is localized our procedure has become pretty well standardized.

A two-stage operation has been found to reduce the mortality greatly, first, by relieving the obstruction, if present; secondly, by allowing for improved nutrition; thirdly, by vaccinating the patient so that the reaction to infection in the second stage of the operation is minimized; and fourthly, by reducing the magnitude of any one single operative procedure. The possible exception to the two-stage operation is the Mikulicz technique which, when indicated, may be done in either one or two stages.

RESECTION OF THE LESION

The first stage, done commonly through a rectus or McBurney incision, has a two-fold purpose. First, an exploration to determine the position and extent of fixation of the lesion, and whether or not metastases are present; and, secondly, a decompression of the bowel, either by a sidetracking anastomosis or by some type of colostomy. On the right side an anastomosis (usually side to side) of the lower ileum to the transverse colon is the procedure of choice, with or without transection of the distal ileum. On the left side, the situation is more complicated. If the lesion is near the splenic flexure it is a temptation to sidetrack the contents of the bowel by an anastomosis of the transverse colon to the descending colon,

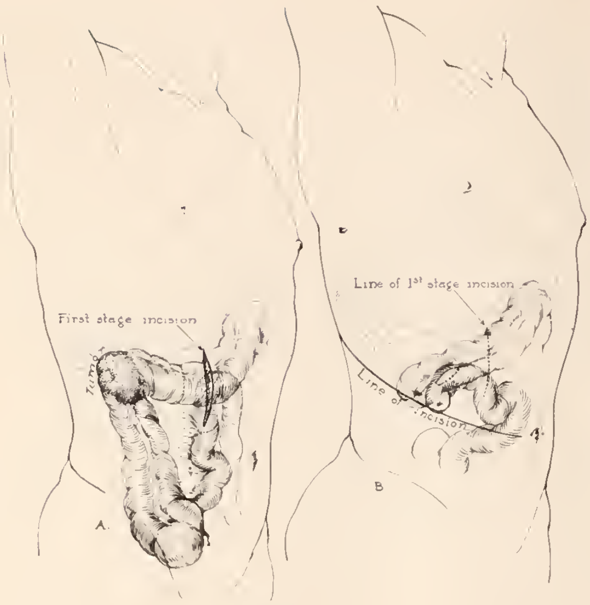


Fig. 3

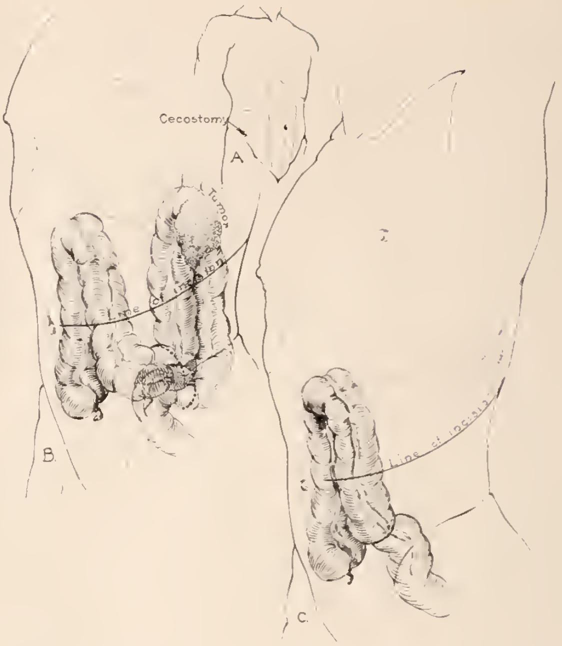


Fig. 4

Fig. 3.—Schematic drawing of procedure for lesions of the right side. (*a*) First stage operation through right rectus incision with an ileo-transverse colostomy. (*b*) Second stage pericostal-transabdominal incision with resection of terminal ileum, cecum, ascending colon and first portion of transverse colon.

Fig. 4.—Schematic drawing of lesions of left side. (*a*) First stage. High McBurney cecostomy (or colostomy if preferred). (*b* and *c*) Choice of these two procedures is optional. (*b*) Pericostal-transabdominal incision, lateral anastomosis with or without resection of tumor. (*c*) Pericostal-transabdomianl incision with resection of tumor and end-to-end anastomosis.

or sigmoid. Too many complications, however, arise from any primary anastomosis to the descending colon or sigmoid, and the mortality rate from this procedure ranges from 25 to 50 per cent. A preliminary cecostomy or colostomy proximal to the lesion makes such an anastomosis much safer, by decompressing the bowel and vaccinating the patient against infection. A cecostomy is more readily closed whenever it becomes necessary to reëstablish the continuity of the bowel, but it seldom diverts the intestinal stream satisfactorily unless obstruction is present. If there is no obstruction a colostomy is preferable.

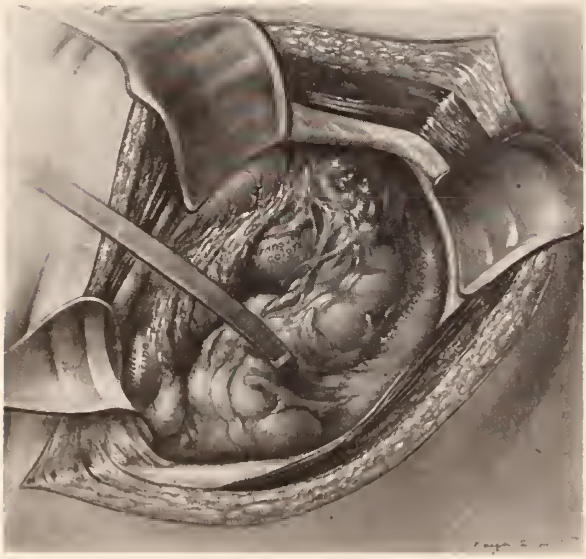


Fig. 5.—Left pericostal-transabdominal incision spread open by elevation of kidney lift showing splenic flexure, descending colon, with line of incision in mesentery.

Some writers advocate a so-called "blind" cecostomy when obstruction is present. The operation is done through a high McBurney incision under local anesthesia, and without any attempt at exploration. While this may be the procedure of choice in certain depleted patients, it leaves the operator in doubt as to the nature and magnitude of the subsequent operation. There is usually no contraindication to exploration of the abdomen in chronic obstruction, even though it requires general anesthesia, and frequently it can be done satisfactorily through the McBurney incision, which is to be used for the cecostomy.

In the second stage, the abdomen is opened through the pericostal-transabdominal incision described above, and the intestines are packed off. The posterior layer of the peritoneum along the mesentery is divided and the ureter located. If the lesion is on the right side the ileo-colic branches to the terminal ileum and the right colic artery are clamped and ligated, and the mesentery with its vessels is divided so that the bowel is released. The suspensory ligament (hepatico-colic) is severed and with this the entire flexure falls downward and can be lifted out of the wound. Care must be taken not to injure the right kidney or duodenum when the mesentery is divided. If a previous ileo-transverse colostomy has been done the entire cecum, ascending colon and a portion of the transverse colon, with any metastases present, are then removed and the end of the gut is closed in the usual manner.

On the left side the second stage procedure is similar. After opening the abdomen through a pericostal-transabdominal incision, the peritoneum is opened along the descending colon, the left colic artery is ligated and the mesentery is divided. Involved lymph glands are removed with the mesentery. The phreno-colic ligament is cut, liberating the flexure. Injury to the spleen, pancreas, stomach and kidney must be avoided. A lateral anastomosis between the transverse colon and the descending colon or sigmoid may be done, followed by removal of the lesion and closure of the ends of the gut; or preferably the lesion may be released and removed, and an end-to-end anastomosis done. In my experience the end-to-end anastomosis is a shorter and more satisfactory procedure. It can be done by the usual open method, but the use of the Furniss clamp and pin has proved to be more rapid, aseptic and generally more satisfactory than any method which I have used up to this time. In any end-to-end anastomosis it is important to note carefully whether or not the blood supply to the remaining stump is adequate before selecting the site for transecting the bowel, and the longitudinal bands should be approximated as far as possible. Any disproportion in the diameter of the two segments of gut to be anastomosed is overcome by slanting the line of transection of the smaller one. I have used interrupted black silk mattress sutures for the inner layer of this anastomosis, with a running catgut suture covering it, or interrupted black silk throughout. The large bowel tolerates silk very well, and little difficulty may be expected if an interrupted type of suture is used. The opening in the mesentery is either closed tightly to prevent herniation of the intestine, or if it does not come together well it should be left wide open and no attempt made to close it.

CLOSURE OF THE INCISION

The kidney lift is lowered, allowing the edges of the incision to fall together. The peritoneum is closed with a continuous suture, and each muscular layer is brought together with interrupted mattress sutures, everting the edges. In some of my patients closure has been made with silk, but catgut has been used in the more infected. For those who have shown the greatest amount of infection or inadequate hemostasis of the vessels in the muscle, drainage for forty-eight hours has been instituted by means of a rubber-dam wick inserted down to the peritoneum, or between the muscular layers, and brought out through the posterior angle of the incision for dependent drainage. This places the opening for drainage over the erector spinae muscles.

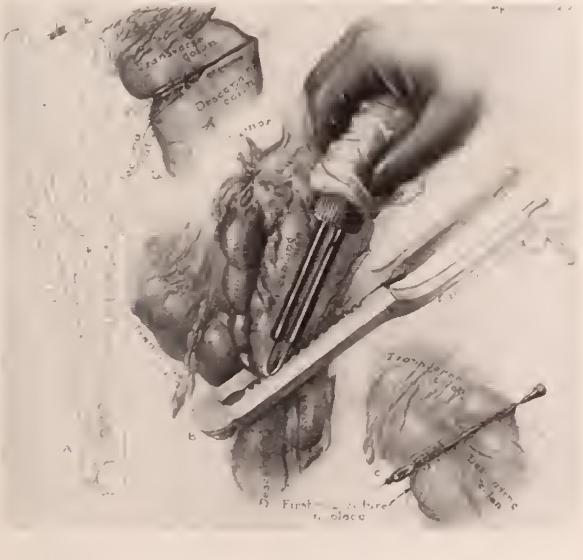
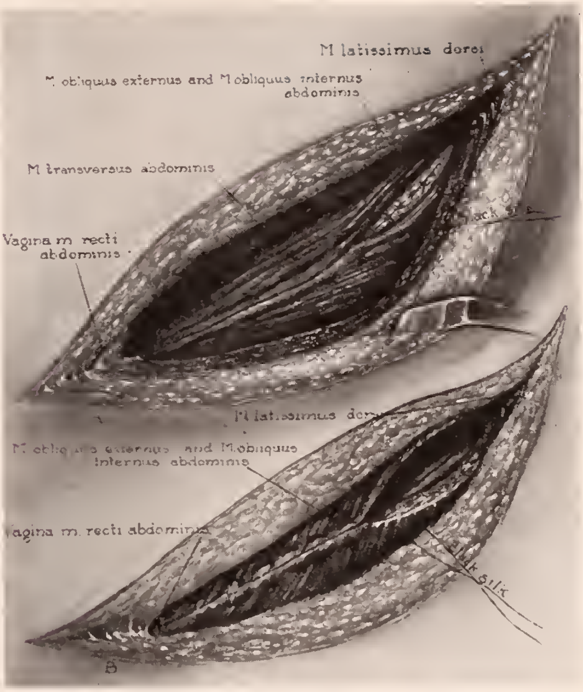


Fig. 6.—(*a*) Furniss clamp showing seration in teeth for passage of pin. (*b*) Application of Furniss clamp to both loops of splenic flexure. (The pin must be inserted before the loop is removed with the cautery.) (*c*) Both loops of gut held by pin with guard and first row of sutures. (*d*) A second row is supplied. The anastomosis is then rotated 180 degrees and the same suturing technique completed before the pin is withdrawn.


M latissimus dorsi
M obliquus externus and M obliquus internus abdominis
M transversus abdominis
Vagina m recti abdominis
black silk
M latissimus dorsi
M obliquus externus and M obliquus internus abdominis
Vagina m. recti abdominis
black silk
B

Fib. 7.—Closure of peritoneum with continuous sutures; closure of muscle layers with interrupted everting sutures. External and internal oblique and latissimus dorsi transected, transversalis split, rectus abdominis muscle fibers exposed.

Once the incision is closed there is little strain upon it, as distension of the abdomen tends to pull the edges of the muscle together rather than to separate them. This in itself is an important factor in preventing herniation.

REPORT OF CASES

Two typical cases selected from a series of ten.

Case 1.—Mrs. M. P. B., aged 46 years, was seen first on June 15, 1934. For at least two months the patient had had indefinite pains in the abdomen, with considerable rumbling and evidence of an incomplete obstruction. Roentgen examinations of the gastro-intestinal tract had been made, but no obstruction was noted. While in another city the patient had so much pain that additional x-ray examinations were made, but, again, no definite point of obstruction was found. On her return to San Francisco, obstruction was nearly complete, a barium enema failed to pass beyond the hepatic flexure, and gas-filled bowel could be seen proximal to this point.

Exploration was done through a right rectus incision on June 16, 1934. Little could be seen in the abdomen except dilated small bowel and ascending colon. Palpation of the hepatic flexure showed a small annular constriction. The mass, apparently a carcinoma, was very small, and certainly would have been overlooked in any exploratory operation had not the point of obstruction been known. A lateral anastomosis was made between the terminal ileum, some fourteen inches from the cecum, and the transverse colon. The patient made an uneventful recovery, and normal bowel habit was reëstablished. The lesion was so far from the incision made for the exploration that it seemed quite impossible to remove it through any type of right rectus incision.

Four weeks later a pericostal-transabdominal incision was made. The kidney lift was elevated, and the entire ascending colon and flexure could be seen and palpated. The ilio-colic and right colic vessels were identified and ligated, and the entire cecum, ascending colon and one-third of the transverse colon were liberated. One metastatic gland was found in the mesentery and removed with it. The bowel was divided with the cautery proximal to the original anastomosis, and removed. The ends were closed with inversion sutures. The patient's recovery was uneventful; there was no interruption of bowel habit and there was little shock connected with the operation. The pathological diagnosis was adenocarcinoma.

* * *

Case 2.—Mrs. F. B., aged 38 years, was seen first on August 16, 1935. The patient had had symptoms of a partial obstruction for a number of months, and had had an appendectomy without relief. As time went on she developed an obstruction, and exploration revealed a lesion at the splenic flexure. A transverse colostomy was done on the right side. Three weeks later, her condition having improved, the abdomen was opened through a left pericostal-transabdominal incision. A rather large lesion, completely surrounding the bowel and with some metastases in the mesentery, was found. Beginning distal to the lesion the mesentery, with the involved glands, was dissected free and the entire mass released. The transverse colon was then approximated to the descending colon with the longitudinal bands in approximation, the loop was crushed with the Furniss clamp and fixed with the pin, and the lesion was removed with a cautery. An end-to-end anastomosis was done over the pin with an inner layer of mattress silk sutures and an outer layer of gastro-intestinal catgut. The peritoneum was then closed and, because of possible soiling, a rubber-dam drain was inserted down to the peritoneum. The wound healed very well, but there was a considerable amount of infection and drainage. In spite of this, the wall became firm. Three weeks later the colostomy was deepened and closed. At this time a finger was inserted through the drainage channel of the pericostal-transabdominal incision and it was found to lead into muscle, and to be surrounded by very firm wall.

Recovery was uneventful and a barium enema on March 6, 1936, showed no evidence of recurrence of the lesion and no indication of the point at which the anastomosis had been made. The pathological diagnosis was adenocarcinoma.

The other eight cases operated by this technique are so similar that they are not reported in detail.

SUMMARY

1. A new method of operative approach by a pericostal-transabdominal incision parallel to the actual nerve supply gives an excellent exposure of the colon and its flexures, and permits their more rapid and complete removal.

2. The use of this incision permits resection and reëstablishment of continuity of the bowel rather than a permanent colostomy for a greater number of patients. It is hoped that the procedure will be a potent factor in reducing the morbidity and mortality of certain lesions of the colon.

3. Recent investigations of the innervation of the abdominal and rectus muscles have shown it to be different from that long accepted by our older anatomists.

384 Post Street.

REFERENCES

1. Coyte, R.: Anatomy and Surgical Bearing of the Nerves Found in the Abdominal Wall, Lancet, 2:1065 (Nov. 18), 1922.

2. Davies, F.; Gladstone, R. I., and Stibbe, E. P.: Anatomy of the Intercostal Nerves, Jour. Anat., 66:323, 1931-32.

3. Goinard, P.: Ann. Anat. de Pathologique, 6:627, 1929.

4. Koster, H.: Resection of the Colonic Flexures, Amer. Jour. of Surg., Vol. 30, No. 1:115, 1935.

DISCUSSION

H. Glenn Bell, M. D. (University of California Hospital, San Francisco).—Doctor Hoag has devised a very interesting approach to the flexures of the large bowel. We have used it at the University of California Clinic on several occasions and find that we get a thoroughly adequate exposure—one which is superior to that afforded by either a right or a left rectus incision. It permits us to protect the edges of the wound so that, even if we do an open anastomosis of the large bowel, we may anticipate having the wound heal per primum. This has been the result on several occasions.

It is always interesting to have someone refresh our memories as to the anatomical structures of the abdominal wall, particularly the nerve supply. The making of the incision described requires, perhaps, a little more time than the usual type of incision—particularly if one is careful to obtain adequate hemostasis. The time spent in opening the abdomen, however, is more than justified by the ease with which the required surgical procedure can be accomplished. Through this approach we have been able to resect the tumor and do an end-to-end anastomosis. We do not, of course, do this in one stage. In each instance we have done at least a cecostomy many days before.

Doctor Hoag is to be commended for bringing before us this incision for use in selected cases.

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Mark Lewis Emerson, M. D. (1624 Franklin Street, Oakland).—In discussing the incision which has been so ably presented to you today, allow me to refer you to Gray's Anatomy, which shows a plate of the inner surface of the posterior abdominal wall after the colon has been removed. You will then see how deep and how close to the spine the two flexures of the transverse colon are situated. It is the surgical approach to this difficult position that is so greatly facilitated by the incision devised by Doctor Hoag. Lesions in either flexures of the colon are not amenable to enucleation and any attempt at the same, especially in the presence of inflammation or extensive pathology will favor operative perforation of the bowel, the most common cause of peritonitis in this type of surgery.

The mesenteric attachments of the colonic flexures must be cut around, either by knife or scissors, including the posterior peritoneum, before mobilization and delivery of the tumor can be accomplished.

The incision advocated by Doctor Hoag not only facilitates this dissection, but also gives a quick approach to various organs in the upper quadrant of the abdomen such as emergency wounds of the spleen, kidney and bowel. Some operators are making the incisions too low, others are attempting to include the author's incision as a lateral extension from the vertical rectus incision whenever the latter is inadequate. Doctor Hoag takes advantage of the decreased shock resulting from the use of a table lift to spread the incision, but he has no objection to retention retractors when the operator deems it necessary. The wide field given by this incision is often all that is necessary to make a lateral posterial approach to the upper angulations of the large bowel.

Doctor Hoag has been working many months on this incision, giving his time to instruct other operators how to use it, and all operators that I have seen use this incision have been most enthusiastic because of benefits derived.

I congratulate Doctor Hoag on his perseverance and his patience in so thoroughly trying out this work before presenting it to you today, also allowing the judgment of others to assist him in his final conclusions.

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Harold Brunn, M. D. (384 Post Street, San Francisco).—Doctor Hoag is to be congratulated on developing a new incision which gives a great deal of room and easy working space in the upper abdomen on either the right or left side. There has been a tendency toward transverse abdominal incisions for some time. This type of incision seems to have the habit of becoming popularized and then disappearing from view and being rediscovered.

The incision of Doctor Hoag's, however, is somewhat different and does give access to a region which is very difficult to reach with the ordinary longitudinal incision through the right rectus.

It is not unusual in abdominal operations, when an exploration has been made through the right rectus, to find it necessary to make a transverse incision either to the left or right in order to obtain more room. Doctor Hoag, however, has developed this operation to its greatest extent and shows how, if properly made and extensive enough in the back, a longitudinal incision is not necessary. I am sure that this method of approach should always be considered when any mass is to be removed either from the right or from the left side, especially those that may be retroperitoneal or for large tumors involving either kidney.

The pictures which illustrate the article are exceedingly good and should be carefully studied in order that the incision developed by Doctor Hoag should be used as described.

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John B. deC. M. Saunders, F. R. C. S. (University of California Medical School, San Francisco).—The approach devised by Dr. Carl Hoag for resection of cancers involving the colonic flexures is a distinct and valuable contribution to surgery. There can be little question that an approach of this type is, in view of its directness, the most logical procedure for exposure of the flexures, which structures are deeply placed in the flanks; in the wide hollows on either side of the prominent bodies of the lumbar vertebrae. The problem raised by such an approach is the question as to whether or not the essential nerve supply of the musculature can be preserved in order to maintain the integrity of the abdominal parieties. Our conception of the course and distribution of the intercostal nerves has undergone considerable changes from those which are to be found in the standard textbooks of anatomy. Doctor Hoag has mentioned the recent work of Davis, Gladstone and Stibbe on the intercostal nerves, which merits the close attention of all those who are interested in problems of abdominal approach. We have been able to confirm for the most part the findings of these authors, findings which indicate that this route is anatomically sound. There can be little question that an approach of this type secures the most adequate exposure of the colon that it is possible to obtain. The position of the patient is an additional advantage in that the abdominal contents are carried out of the way and do not obstruct the field.

The dictum that the surgery of carcinoma of the large bowel is dependent upon its lymph drainage and vascular supply has now become axiomatic. An approach which enables us to reach with ease the vessels of the colon, to mobilize the bowel and to perform wide resection of the lymph bearing area is a decided advantage. The value of this route is nowhere better illustrated than in cases of carcinoma of the splenic flexures. It is well known that recurrences after resection of this flexure invariably occur in the region of the hilum of the spleen. The usual anterior type of approach renders it difficult to deal with this area, whereas by means of the postero-lateral route described by Doctor Hoag this region is readily accessible.

Doctor Hoag is to be congratulated on the approach which he has devised as it presents so many valuable features in dealing with malignant disease affecting the colon. Exposures of this type warrant a more extensive use than has been accorded to them in the past.

ADRENAL ENDOCRINOPATHIES IN CHILDHOOD*

By H. Clare Shepardson, M.D.
San Francisco

Discussion *by Rieta C. Hough, M.D., San Diego; Frank Hinman, M.D., San Francisco; Francis Scott Smyth, M.D., San Francisco.*

Although Eustachius discovered the adrenal glands in 1563, their importance was not suspected until nearly three hundred years later when Addison, in 1855, showed their relation to the disease known by his name. In the human there are two adrenal glands, which lie embedded in the fat above the kidney on either side. These small triangular or cocked-hat shaped bodies are composed of two parts, cortex and medulla, which, although anatomically united, are morphologically and embryologically distinct structures. The cortex is derived from the mesothelium of the Wolffian ridge, as are also the ovary and testis, while the medulla takes its origin from the intraneural ectoderm that gives rise to the nerve cells of the sympathetic ganglia. In the higher animals the anatomical contiguity of these derivations of the interrenal and chromaffin systems is so intimate that they are fused into a united gland. However, accessory adrenals or aberrant masses of adrenal tissue are met with frequently. These are often quite small, and are found usually in one of four chief locations, in the kidney along the suprarenal vein, near the solar plexus and the inferior surface of the liver, about the uterus, ovary and tube, and in the spermatic cord and corpus Highmori.

ADRENAL GLANDS A FAVORITE FIELD OF STUDY FOR THE EXPERIMENTAL PHYSIOLOGISTS

Of all the members of the ductless glandular apparatus, the adrenals have been the happy hunting grounds de luxe for the experimental physiologist. Yet, despite the amazing ingenuity of these indefatigable workers, the present state of our knowledge regarding the physiology of the adrenal is still far from satisfactory. Extirpation of one adrenal has little or no apparent effect, although when both are removed death speedily ensues. While much controversy has surrounded the question as to which portion of the adrenal body is essential to life, it has now been demonstrated that death is due to removal or destruction of the cortical substance and not to loss of the medulla. Unfortunately, "up to the present time it has not been possible to produce experimentally any well characterized symptoms associated with adrenal insufficiency. The operator either leaves so much of the gland that the animal survives indefinitely in good health, or takes away so much that it dies quickly, as it would have done if the glands had been totally excised." (Stewart.) No intermediate state between health and death has been achieved. As a result many details of the physiology of the adrenals are still unknown or contradictory. However, with the isolation of an active cortical hormone (or hormones) by Hartman, and by Swingle and Pfiffner, a new chapter in the physiology of these glands, particularly the "indispensable to life" portion, is being written.

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* From the University of California Medical School, San Francisco.

Read before the Pediatric Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

ADRENAL GLAND FUNCTION FREQUENTLY MISINTERPRETED

Heretofore, all manner of conditions have been ascribed to disturbance in function of the adrenal glands, particularly insufficient activity, mostly as a result of a slightly lowered systolic blood-pressure. It is a simple matter to fasten the label of adrenal deficiency on to any individual who feels somewhat below par, and whose blood-pressure ranges between 100 and 110 millimeters of mercury. Thus we have seen the hypoadrenal constitution, the hypothetical hypoadrenalism associated with infectious diseases, and various and sundry intoxications and dyspepsias. It has been inferred that many or all of these so-called hypoadrenal states are mild, incomplete forms of Addison's disease, and this in spite of the fact that experimental physiology affords no basis for the view that loss of the epinephrin secretion of the medulla is in itself important. Stewart has shown that arterial hypotension is not caused even when the epinephrin output is totally suppressed.

No mention will be made of the multitude of conditions at one time or another ascribed to adrenal disturbance, when the evidence for such relationship is either faulty, dubious or purely imaginative. There are, however, a few clinical syndromes in which adrenal lesions of unimpeachable character have been repeatedly discovered. And even in these maladies, where the adrenal pathology is beyond question, the functional interpretation of the clinical manifestation is often difficult, doubtful or impossible.

ANOMALIES OF THE ADRENAL BODIES

Anomalies of the adrenal bodies have little clinical significance. Usually they are found associated with cerebral defects. Zander discovered abnormally small adrenals in forty-two cases of hemicephaly. Hypoplasia of the adrenal cortex has accompanied anencephalus and may be associated with pituitary anomalies. In Czerny's five cases of congenital hydrocephalus, the medullary portion of the adrenals was entirely lacking. In Elliott and Armour's case of anencephaly the adrenal cortex was absent. These congenital malformations are extremely unusual, and so bizarre that it is impossible at present to determine whether the cerebral and adrenal anomalies are merely coincidental, or whether the brain abnormalities are in some peculiar way dependent on the adrenal defects.

ACUTE ADRENAL INSUFFICIENCY

Acute adrenal insufficiency, with symptoms quite different from those of Addison's disease, occurs in the so-called suprarenal apoplexy of small children. Virchow first called attention to the condition. The characteristic symptoms are sudden onset with fever, violent pain in the hypochondrium radiating to the loin, later tympanites, collapse and death within forty-eight hours of the onset of the attack. Glauzmanns' review, in 1933, refers to this condition, which in small children is frequently accompanied by cutaneous purpura, as the Waterhouse-Friderichsen syndrome. As Osler pointed out years ago, the picture presented by acute hemorrhagic adrenalitis resembles quite closely that of acute pancreatitis. However, the degree of shock in the former is more profound than that encountered in acute pancreatitis, or in peritonitis or ileus.[2] The destructive hemorrhage may occur in adrenals that were previously healthy, or in those that were the seat of disease with or without symptoms. In the searching for etiological factors responsible for this condition, a great number of theories have been advanced. Kempf[3] calls attention to the developmental changes taking place in the adrenals, both in intrauterine life and particularly in the first twelve months after birth. From the first month to the twelfth month postpartum, there occurs a capillary hyperemia of the inner layer of the adrenals which at birth consists mostly of cortex, except for small complexes of medullary cells dispersed about the veins. After the second month this hyperemia is marked and there occurs fatty, vacuolar and colloid degenerative changes in the cortical cells, the atrophic cells being replaced by the medullary cells which ever increase in number as if being able to withstand the pressure of the hyperemia to which the cortical cells succumb. It is this hyperemia and destruction which Kempf claims is the most important predisposing factor in adrenal hemorrhage in the young.

Many clinicians have assigned the dominant rôle in the production of symptoms to variations in the epinephrin output. It is the general impression that a marked diminution of epinephrin is of serious import, its total suppression a calamity. However, like many other clinical impressions, these are not supported by experimental data; for, as has been mentioned, there is no evidence to show that diminution in the ordinary rate of output of epinephrin can give rise to symptoms. Yet it can only with difficulty be presumed that the lethal outcome results from destruction of the cortex, for fatal cases have been reported in which the cortex was morphologically well preserved.

Diagnosis during life is very difficult. The presence of severe abdominal symptoms with few or no physical manifestations, profound asthenia and gradual decline of blood pressure should suggest the presence of acute hemorrhagic adrenalitis. The leukocyte count is apt to be high and there may be a marked hyperpyrexia.

Treatment of bilateral suprarenal apoplexy has met with little success. Surgery offers no help.[2] The administration of large amounts of sodium chlorid, together with cortical extract, sedatives and even adrenalin, seem only to postpone the fatal outcome.

CHRONIC ADRENAL INSUFFICIENCY

Chronic adrenal insufficiency, first described by Thomas Addison, in 1855, results in a symptom complex universally associated with the name of its discoverer. While Addison's disease is preponderantly one of the fourth, fifth and sixth decades, it may occur at any age. Osler described a congenital case in which the child lived eight weeks. The youngest patient in Rowntree's[4] series of approximately three hundred cases was fourteen years of age. Morabito,[5] in his article on Addison's disease in infancy, remarks that the disease is rare in infancy, probably because the suprarenal glands possess special resistance to tuberculous infection and to other processes that lead to this disease.

It is generally accepted that in spite of the fact that the condition has not been produced experimentally, a hyposecretion of both the medulla and the cortex of the adrenal glands is the causal factor of the disease (although the recent suggestion by Wilder [6] that Addison's disease may have to be considered as resulting from disturbed function of the anterior hypophysis, as well as the adrenals, may prove extremely important). While any pathologic lesion which destroys the suprarenal bodies will produce the characteristic syndrome in whole or in part, tuberculosis is, of course, the commonest cause. It is interesting, however, that only one third of Rowntree's patients had clinical evidence of tuberculosis and that Addison's disease is extremely uncommon in patients in sanitariums. In Lewin's[7] series of five hundred cases, tuberculosis was present in about one-third. It should be added that atrophy or hypoplasia of the adrenals is a more common cause of this disease than has heretofore been supposed, although such pathologic changes are only rarely encountered in childhood.

The disease is characterized clinically by marked asthenia, resulting from both muscular and vascular weakness, continued and extremely low blood-pressure, a characteristic brown or chocolate colored pigmentation of the skin and mucous membranes, especially of the mouth, gastrointestinal symptoms including diarrhea, vomiting, pain in the epigastrium and later complete anorexia, and loss of memory, delirium, dizziness, tinnitus and other nervous and mental manifestations, such as constant apathy, depression, insomnia or rarely, increased tendency to sleep. The temperature is usually subnormal; there is no anemia except that resulting from such complicating diseases as tuberculosis or cancer. The blood sugar is low. Other laboratory procedures give little aid in diagnosis; although ordinarily little trouble is experienced, for the picture is one which can scarcely be confused with any other clinical syndrome.

Until quite recently the treatment of Addison's disease has been rather a thankless task. Even now the course of the disease usually is progressively downward, although occasionally a patient seems to recover spontaneously; remissions may occur, persisting for a number of weeks, months or even years. Until three or four years ago progress toward remedy of this malady was negligible in spite of the heroic efforts made to administer the only active extract of the adrenals then known, epinephrin, orally, rectally and by hypodermic. No convincing improvement ensued from medullary adrenal therapy. More recently, however, improvement seemingly has followed the administration of the adrenal cortical extracts of Swingle and Pfiffner, and of Hartman. It is as yet premature to forecast the ultimate scope of adrenal cortex therapy in Addison's disease, but it is obvious that the isolation of this hormone constitutes one of the major advances in endocrinology. Lisser, Taylor and Leet,[8] in summarizing the accomplishments of cortical extracts in the treatment of Addison's disease, state that while enough persons who would have succumbed almost certainly within twenty-four hours have been revived by cortical extracts, to banish any doubt as to the specificity or potency of this hormone, further purification and concentration are needed. The expense involved in administering adequate doses is prohibitive except in isolated instances. Cheaper methods of extraction are most desirable, so that these preparations can receive the clinical application they deserve. During crisis, daily injections of 50 to 100 cubic centimeters of this hormone, as it now exists, are required. This tremendous dosage may be necessary for several days, although subsequently the patients' health may be maintained with as little as 2 cubic centimeters daily. In most instances, however, the maintenance dose varies from 3 to 5 cubic centimeters daily. Consequently, the actual use of this hormone has been restricted to the very few who can afford it, or to such clinics as are richly endowed.

It is altogether probable that the suggestion made by Harrap that a high salt intake may markedly reduce the need of cortical extract, except in times of crises, will aid in solving to a certain extent the problem of costliness. Sodium chlorid should be given daily in doses of 1 to 7 grams.

Finally, it should be added that once the hormonal deficiency is adequately replaced, the problem of the chronicity and of the tuberculosis must still be faced.

MEDULLARY TUMORS

Inasmuch as the anlage of the suprarenal medulla lies in the sympathetic ganglions, which in turn are derived from the neural crest, medullary growths are of neuroblastic origin. Two forms are usually encountered: the type described by Hutchinson and the one depicted by William Pepper (III). They usually occur during infancy or early childhood.

The Hutchinson variety is characterized by metastatic involvement of the orbit, skull and long bones. Ecchymosis of one or both eyelids, soon followed by exophthalmos, is a frequent occurrence. The discoverer of this peculiar syndrome originally reported thirteen cases in children from three months to nine years of age.

The Pepper type is characterized by its rapid growth and its tendency to metastasize to the liver, lungs or abdominal lymph-nodes. The liver especially may be diffusely involved, the abdomen becoming greatly distended, but without ascites or jaundice.

In a third and very rare clinical type of neuroblastoma, the symptoms of severe secondary anemia develop. The case may be mistaken for one of pernicious anemia.

Mention is made of these three types of medullary tumors simply for the sake of completeness. None of them result in endocrinopathies.

The paragangliomas or chromaffin cell tumors are the most significant of the medullary group. It is with these rare tumors that nonnephritic paroxysmal, or intermittent, hypertension has been reported. This clinical syndrome (which is characterized by recurrent attacks of marked hypertension, although in the interim the blood-pressure may remain quite normal), is due in all probability directly or indirectly to the excessive secretion of epinephrin or some allied compound. The tumors are usually benign and do not produce cachectic states. Wiesel[9] called attention to the vascular sclerosis due to this type of tumor in a child aged two years. A few instances of cure resulting from removal of the tumor have been reported.

"In a study of the cases reported in the literature of tumors of the suprarenal gland, the complexity of the whole problem is especially striking. There are many cases in which the clinical and pathologic data seem to indicate involvement of some particular portion and even some type of cell, and the diagnosis is definite and clean cut. In other instances the complexity of the clinical picture would seem to point to involvement of both the medulla and cortex."[10]

SECRETIONS OF THE SUPRARENAL CORTEX INFLUENCE THE DEVELOPMENT OF THE SEXUAL SYSTEM

There can be no reasonable doubt that the secretions of the suprarenal cortex exert a powerful influence upon the development of the sexual system. Numerous cases of tumor of the suprarenal cortex have been reported, uniformly associated with marked changes in bodily development, and anomalous sex manifestations. Depending on the age in which the disease arises, the glandular manifestations vary. Thus, if the influence of the cortical growth with its excessive function begins during prenatal life pseudohermaphroditism results, while in the group in which the hyperfunction originates in early childhood, prior to puberty, the syndrome of pubertas praecox develops. A third type, occurring only in the adult female, is associated with virilism. Several instances of pseudohermaphroditism resulting from or at least associated with bilateral hyperplasia of the suprarenals or with ectopic suprarenal rests, have been reported. It occurs more frequently in the female and consists in a marked overgrowth of the clitoris with concomitant suppression of growth of the uterus and ovaries. However, we have seen recently at the University of California Hospital what was supposed to be a boy of two years of age, who externally had what seemed to be a small penis, with the urethra in the normal position, and below it an empty scrotum. An exploratory laparotomy revealed the presence of ovaries, tubes and uterus. At autopsy this patient was found to have a bilateral suprarenal cortical hyperplasia.

No satisfactory treatment has been devised as yet, although the recent interest in adrenal surgery may, by partial adrenalectomy, provide an opportunity for normal femininity to develop by removing the masculinizing impulse.

TUMORS OF THE SUPRARENAL CORTEX

Tumors of the suprarenal cortex developing in childhood produce a premature growth and ripening of the entire organism. A large proportion of these cortical tumors have been found in females. However, Lisser,[11] after carefully searching the literature, found eight unquestionable instances of adrenal cortical tumors in boys causing sexual precocity. After reporting a ninth case, and the only one of this kind in which the tumor was successfully removed, he adds that two additional cases very likely may fall in this category. Freedman[12] has adequately discussed the differential diagnosis from pineal tumors and tumors of the gonads. The former (pineal tumors) always occur in boys and uniformly result in excessive height and rapid physical development, whereas the latter in most instances are found in girls. In fact, most of the cases of precocious puberty in girls have been found due to ovarian growths, probably granulosa cell tumors. Hyperfunction of the internal genitalia, with consequent abnormally early menarche, is usually associated with this type of tumor. Premature onset of the menstrual cycle points to pathologic involvement of the ovaries; suprarenal cortical tumors are more apt to produce hypertrophy of the external genitalia. In addition, there seems to be a "tendency to the development of the male at the expense of the female characters in the girls (virilismus), and an intensification of the male characters in the boy (pubertas praecox virilis)." Girls are masculinized, as is exemplified by the growth of beard and mustache, hair on the chest, upper thighs and abdomen and by hypertrophy of the clitoris, deepening of the voice and a masculine bodily configuration. Menstruation is usually absent, although in certain cases in which cortical tumors have been found there has been early female sexual development with the onset of menstruation in early childhood.

Boys of four or five may have the external genitalia of the adult, as in Lisser's case, with abundant hair on the mons pubis, in the axilla and on the upper lip and chin.

The accelerated development is not restricted to the sexual domain or secondary sex characters, but is accompanied by advanced ossification, dentition, bone growth, unusual muscular strength, and adiposity. The development of the psyche does not, as a rule, keep pace with the rapid bodily growth and maturity in contrast to the astonishing maturity of thought, mind and speech said to be associated with the rare instances of macrogenitosomia praecox resulting from pineal tumors.

It is the recognized association of hirsutism and virilism with adrenal cortical tumors which has resulted in the suggestion that yet another hormone may be secreted by the cortex, since excesses of the cortical hormone as it is at present known can hardly be held responsible for this syndrome. As a matter of fact, our present knowledge of the physiology of the adrenal glands is in many respects quite primitive. Undoubtedly new researches will, in time, clarify the present chaotic mass of information now at our disposal. For the present, however, it is felt that a brief review of this type should concern itself only with variations from the normal which can be ascribed with reasonable certainty to abnormal function of the adrenal glands. Finally, it should be mentioned that in as much as consideration has been given only to those conditions for which we have rather definite evidence that alteration in activity of either the medulla or cortex of the adrenals is the morbific factor, no attempt has been made to analyze the rather voluminous literature which has accumulated on the subject of adrenal dysfunction.

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REFERENCES

1. Glauzmann, E.: Waterhouse-Friderichsen Syndrome, (Suprarenal apoplexy accompanied by cutaneous purpura in small children), Jahrb. f. Kinderh., 139:49-63, 1933.

2. Pearl, F., and Brunn, H.: Suprarenal Apoplexy, Bilateral, Surg. Gynec. and Obst., 47:393-400, 1928.

3. Kempf, H.: Ueber die Bedeutung der nebennierenblutung fuer den ploezlichen, Vierteljahrschrift fuer gerichliche Med., 56:71, 1918.

4. Rowntree, L. G.: Addison's Disease, The Cyclopedia of Medicine, F. A. Davis Co., Phila., 1:139, 1931.

5. Morabito, F.: Addison's Disease and Its Indistinct Forms in Infancy, Pediatria, 35:969-979 (Sept.), 1927.

6. Wilder, R. M., and Wilbur, D. L.: Diseases of Metabolism and Nutrition, Arch. Int. Med., 55:304-343, 1935.

7. Lewin, G.: Charité Annalen, 12:728, 1885; Ibid, 17:536, 1892.

8. Lisser, H., Taylor, F. B., and Leet, N. B.: The Adrenal Cortical Therapy of Addison's Disease in Clinical Practice, Endocrinology, 18:333-340 (May-June), 1934.

9. Wiesel: Der Heutige Stand der Lehre von der Arteriosclerose, Vienna, 1909. Quoted by B. C. Oppenheimer and A. M. Fishberg in "Association of hypertension with suprarenal tumors," Arch. Int. Med., 34:631-644, 1924.

10. Rowntree, L. G., and Ball, R. G.: Diseases of the Suprarenal Glands, Endocrinology, 17:263-295, 1933.

11. Lisser, H.: Successful Removal of Adrenal Cortical Tumor Causing Sexual Precocity in a Boy of Five Years of Age, Transactions—The Association of American Physicians, 48:224, 1933.

12. Freedman, H. J.: Disturbances in Function (of adrenals) in Children, Amer. J. Dis. Child., 44:1285 (Dec.), 1932.

DISCUSSION

Rieta C. Hough, M. D. (1212 Medico-Dental Building, San Diego).—Doctor Shepardson has covered the subject so thoroughly that relatively little is left to say. However, there are one or two points which may be noted.

The adrenals contain more vitamin C in the form of "ascorbic acid" or, as it has more recently been called, "cevitamic acid," than any other gland in the body. Experiments on rats indicate that scurvy is a dysfunction of the adrenals. Probably the improvement in patients with malnutrition who have been fed adrenal compound may have been due as much to the ascorbic content as to the gland itself.

The relation between the adrenals and sodium metabolism has definitely been brought out, patients with Addison's disease are greatly improved by the addition of large amounts of sodium chlorid to their diet, and the dosage of cortin required varies with the sodium chlorid intake. Recently it has been reported that adrenalectomized animals have been kept alive indefinitely by the giving of sodium chlorid and sodium bicarbonate, or sodium chlorid and sodium citrate without the use of cortin; if this proves satisfactory in humans, it will be a boon to the patients with Addison's disease.

The suggested use of cortin in cases of bronchial asthma, glaucoma, mastoiditis, low blood pressure, generalized weakness, etc., indicates that our knowledge of adrenal function is limited, and that the study of this gland still offers a large field for research.

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Frank Hinman, M. D. (384 Post Street, San Francisco).—These conditions, which have been so fully described by Doctor Shepardson, open up an entirely new field in surgery. The great possibilities in the surgical correction of pseudohermaphroditic anomalies were presented recently in a striking manner by Doctor Young, who has done pioneer work in this field.

There are two aspects for consideration: First, discovery and correction of the endocrine disturbance; second, surgical repair of the anomaly of development which this disturbance has produced. Confusion will arise in the correct interpretation of the endocrine disturbance, because of the close interrelations of the activities of the pineal, pituitary and thymus glands, and the gonads with those of the adrenals. Cryptorchids occasionally are found to be pseudohermaphrodites. The sexual syndromes arise from the adrenal, through changes in the normal activity of the interrenal component (cortex). When hyperactivity occurs in fetal life (usually in females), it produces pseudohermaphroditism; when in fancy (usually in males), it produces precocity; and when it occurs after puberty (usually in females) hirsutism and masculinism result. The pathologic change in the adrenal gland, associated with these various syndromes, is an increase in the number of cortical cells either in the form of a circumscribed adenoma, of diffuse adenomatous nodules, or of uniform hypertrophy. Sometimes these changes cannot be recognized by the surgeon even after full exposure of the glands. The circumscribed adenomas, as in Lisser's case, will displace the kidney downward and outward, a well-marked characteristic of adrenal tumors which is demonstrable pyelographically. The other forms of cortical hyperactivity give no urologic indication—no tumor is demonstrable, pyelograms are normal, and the diagnosis must be made on the strength of the genito-adrenal syndrome alone. Exploratory operation is indicated. If there has been no clinical evidence of the side on which a possible adenoma may be present, and exposure of one gland reveals apparently normal tissue, it is well not to close the wound until after the other gland has been inspected; because, if it also reveals no adenoma and is normal in appearance, the indication is for partial resection of both glands. In two such instances in my own experience, subsequent microscopic study of the resected portions revealed hypertrophic nodules as the cause of the cortical hyperactivity. This is just one of the types of surgery applicable to the first aspect of the problem: correction of the primary endocrine disturbance. It may be all that is required surgically.

The many interesting types of surgery applicable to the repair of the various maldevelopments caused by excess hormonal activity and deficiency cannot be more than mentioned in this discussion. This second aspect of the problem, however, is as important as the first. The remarkable case of Doctor Young's patient with true hermaphrodism (both testis and ovary), in whom masculine characteristics were made predominant by removal of the female structures and repair of the male, is an example of what can be done surgically in this new field.

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Francis Scott Smyth, M. D. (University of California Hospital, San Francisco).—The great temptation to let fancy roam when discussing problems of endocrinology is altogether too frequent in medical literature. Doctor Shepardson has, however, clearly presented only what is known, and has shown great restraint in discussing the confusion of clinical application. I dare say that it might have been easier for him to have limited his treatise to a lengthy review of experimental work, or to have indulged in a flight of ideas in discussing detailed case studies. However, he has avoided both extremes. Those of us who have seen some of the patients to whom he refers, and have likewise benefited from Doctor Lisser's pioneer interest in the field, can realize how valuable is persistent study linked with healthy skepticism.

ELECTROCARDIOGRAPHY: ITS VALUE TO THE GENERAL PRACTITIONER*

By H. M. F. Behneman, M.D.
San Francisco

Discussion *by Lewis Gunther, M.D., Los Angeles; John J. Sampson, M.D., San Francisco.*

In presenting this paper on electrocardiography, I realize fully that you have come here tonight for an exchange of ideas having some definite practical value in your daily work. Matters of purely scientific or academic interest, as well as the late developments of the various specialties, can be reviewed by you from the multiple medical journals in circulation. I am fully aware of the time element that must play a major rôle in a medical practice such as yours, with its wide geographical distribution. You, however, are interested as much in practical aids to diagnosis as the patient is in treatment. So it is, with these things in mind, that I accept your kind invitation tonight to discuss a subject that has been gradually establishing a place for itself in the practice of medicine, but of which a large number of physicians have not been able to develop a working knowledge.

Heart disease still remains, and by a fairly good margin, the leading cause of death in this country. A good percentage of these cases of heart disease come under the grouping of the cardiac irregularities.

PRACTICAL VALUE OF AN ELECTROCARDIOGRAM

The question in your minds tonight, then, is this: Of what practical value is an electrocardiogram? My answer is threefold. First, the electrocardiogram has given the practitioner greater knowledge in the diagnosis of cardiac disease. Secondly, the electrocardiogram has rendered prognosis more accurate; and, lastly, it has rationalized therapy to a great extent. I ask you to think of cardiography as you would roentgenology: in other words, as an adjunct to various other diagnostic methods, principally those of physical diagnosis. Cardiography does not displace any of our other methods, such as history taking, inspection, percussion, auscultation, roentgenology, and laboratory work. The diagnosis of a patient's malady should no more be made solely from a cardiogram than from an x-ray. It may confirm, however, the same as does an x-ray, our suspicions when we have limited our diagnostic possibilities to a narrow margin and need help in their elimination.

HISTORY OF GRAPHIC METHODS

Taking just a few moments for a very brief mention of the history of this subject, I bring first the name of Einthoven of Holland, who was really the father of this subject by the introduction of his string galvanometer. We already knew from the old frog-heart experiments, particularly those of Müller in 1856, that the contraction of heart muscles resulted in the production of differences in electric potential. Then Waller, in 1887, demonstrated that these differences in potential could be recorded, but the instrument he used was totally inadequate, being a capillary electrometer. Now this more sensitive instrument enables us to reap the benefits of graphic methods.

PHYSIOLOGIC PHASES

Now, a few words concerning the physiologic phases of electrocardiography. We know that the successive contractions of auricles and ventricles are due to the passage of an electrical wave of excitation which precedes the contraction of the heart chambers so stimulated. We know that this impulse seems to originate in muscle tissue comprising the sino-auricular node, also called the pace maker. From this pace maker, the stimulus spreads rapidly over the right auricle, much as a pebble spreads waves when it is dropped into water. From the right auricle it goes to the left, then to the ventricles through the auricular-centricular node and down the bundle of His, into its right and left branches, and on to the network of fibers lining the walls of the ventricles.

Now it has also been long known among physiologists that if two electrodes are placed on an uninjured cell no deflection of the galvanometer can be detected; but in the case of an injured cell a difference of potential is developed between injured and uninjured regions. It is upon this physiologic basis that electrocardiography rests. The record we finally obtain, therefore, represents the algebraic results of these electrical stresses occurring from time to time in the direction of the plane employed. The active heart is just an electric battery surrounded by a large mass of conducting medium, which varies in potential and in the position of its poles during each cardiac cycle, thereby giving rise to the various waves of the electrocardiogram. It also pictures the time relation of the spread of these currents as well as their direction.

ESSENTIALS OF THE TECHNIQUE

The technique can be shown you in a few moments. Suffice to say here that this technique consists merely in the photographic registration, on a moving-picture film, of the movements of a reflected beam of light coming from a mirror properly mounted in an electromagnetic field, and caused to move by small changes of electric potential that enter from the electrodes which are attached to the body surface of the subject. You know, as well as I, that whenever any muscle contracts it develops an electric potential; but when we have the body completely at rest all muscles are perfectly inactive except those of respiration and the heart. The electrocardiogram then becomes a concise graphic record of the electrical activity of the heart which we are examining. There are three graphic results on each tracing which we call leads. Lead one is the electrical potential picked up in the horizontal plane from left wrist to right wrist. Lead two is that received in an oblique plane from right wrist to left ankle, and lead three is the result obtained in the vertical plane from left ankle to left foot. I shall not take your time to go over the subject of the interpretation of these tracings. At the conclusion of this paper, however, I shall show some slides of normal and pathologic tracings which I am sure will be of interest to you. At that time I shall explain some of the fundamentals of their interpretation.

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* Read before the Humboldt County Medical Society, Humboldt, September 18, 1935.

"The irregularities of the heart often confound the physician. The electrocardiogram is the final court of authority in all these cardiac irregularities. Frequently, thorough physical examination is all that is required for diagnosis. But at times certainty is possible only by employing graphic methods, and even then, as in autopsies, the diagnosis may occasionally fail to be clear. . . . "[1]

ELECTROCARDIOGRAPHY AIDS IN UNDERSTANDING OF DEFECTS IN CARDIAC MECHANISM

Once the simple facts of an irregular pulse have been ascertained, our interest naturally inquires further to ascertain what cardiac mechanism is behind this irregularity; because the management, the therapy and the prognosis often depend upon the nature of this disturbance. Let me give a few instances. Sinus arrhythmia, probably the commonest of all cardiac irregularities, is quite prominent in some individuals, and nearly absent in others, and usually has no pathologic significance. If, however, ordinary sinus arrhythmia is complicated by the presence of extrasystoles, it is often confused with auricular fibrillation, certainly a condition resulting from serious organic heart disease with an equally serious outlook. Similarly the significance of common extrasystoles is far different from that of auricular fibrillation. Moreover, extrasystoles which come from multiple foci are more serious than those arising from a single focus. We know that when we get any ventricular extrasystoles these may be a warning of usually fatal ventricular tachycardia, or ventricular fibrillation. Another instance where it is important from the standpoint of treatment and prognosis to differentiate, is the diagnosis between auricular fibrillation and partial heart-block, wherein there are occasional dropped beats. The sound at the apex and the feel at the wrist is practically the same in auricular fibrillation as it is in partial heart-block, where there are dropped beats. However, our treatment is radically different, as is the prognosis. Digitalis and quinidin are of great benefit in the treatment of auricular fibrillation, whereas we would tremble to use it in even moderate heart-block, for fear of inducing a partial block to become a complete one, an extremely serious condition.

INTERPRETATION OF CERTAIN PALPITATION CASES

And now I would like to mention a condition frequently seen by the internist with somewhat marked subjective symptoms, but with a physical examination that almost leaves one at a loss as to the etiology of the patient's complaint. This is the type of individual who comes in sometimes in youth, but usually in middle age or later, with a complaint of shortness of breath or palpitation on almost the least exertion. Our history may help us if there has been rheumatic fever. If not, the history may be worthless. Our physical examination may not reveal any cardiac pathology by all of our physical methods, nor does the x-ray reveal any pathologic hypertrophy. We take our electrocardiogram and find a very interesting situation. We can see at a glance that through some previous destructive factor the conduction time between the auricle and the ventricle is markedly delayed. This is definite heart-block, a mild form early in the game, but the forerunner of serious myocardial involvement or more complete block as time goes on. Therefore the clinical recognition of milder forms of heart-block is difficult, and quite impossible without graphic methods. This prolongation of conduction time between the auricle and ventricle is one of the early manifestations of rheumatic heart disease, or any other disease process resulting in sclerosis or destruction of the conduction fibers. A block between the auricle and ventricle, if complete, can be recognized by the pulse rate, but if partial it can only be differentiated with the aid of an electrocardiogram. We see many patients with a pulse rate of 50, 55, 60; in other words, an ordinary bradycardia for which outside factors have been blamed, such as gall-bladder disease, vagus stimulation, and so forth. The vast majority of these people show, when a cardiogram is made, that they have a heart-block of varying degrees, and that we are having as many as two or three auricular beats to every one of the ventricle; but there is no irregularity at the wrist because the ventricle is beating slowly and evenly, but it is a serious condition with a serious prognosis if let alone.

CARDIOGRAM FURNISHES GRAPHIC EVIDENCE OF MUSCLE INVOLVEMENT

Now next in importance as a diagnostic aid in the irregularities and the partial and complete blocks, the cardiogram is distinctly valuable in giving us graphic evidence of muscle involvement. As previously mentioned, severe myocardial damage can be diagnosed from the history and physical findings without a cardiogram, but the degree of that damage cannot be accurately known without one.

Moreover, there are three definite instances in which this graphic evidence is of fine significance, without any reference to the physical findings of the patient. These are recent coronary occlusion, overdigitalization, and bundle branch block. However, we cannot state unconditionally that the degree of abnormality in a cardiogram always parallels the amount of cardiac damage, since the heart, like the brain, has many silent areas. However, the electrocardiograph does record *every* change in the functional capacity of the heart, and it will record changes in the anatomy of the heart if these changes have advanced enough to disturb its function.

VALUE IN TREATMENT OF CARDIAC IRREGULARITIES

Also, the electrocardiogram aids definitely in the treatment of irregularities by serving as an important aid in following the extent and recovery from coronary occlusion, and by indicating the stage of digitalization reached in a patient being observed. Without a cardiogram, in your treatment or mine of auricular fibrillation, we may induce so many extrasystoles by the use of digitalis that we may convert an auricular fibrillation to a perfectly normal mechanism; but our extrasystoles that we have induced may lead us completely astray, leading us to believe that the fibrillation still exists when it does not, with the result that we mistakenly push the digitalis still further. A cardiogram shows us our error instantly.

THE CYCLE OF A NORMAL TRACING

Now before showing the slides of a few interesting cases I wish to draw one diagram, a simple one which, if you will keep it in mind, will give you the basic standard behind the interpretation of all tracings. Let me draw one phase of the so-called cardiac cycle; in other words, one complete cycle of a normal tracing. Please try to keep this normal in mind when I show these pathologic tracings, and you will see the distinct difference in them and in their significance to the interpreter. The different waves recorded for each cardiac cycle are labeled with certain letters of the alphabet. The letters themselves do not stand for any particular words; they were merely picked at random. They are known as the P, the Q. R. S., and the T waves. Looking at the normal cardiac cycle, which I have drawn here, this wave, the P wave, is the wave related to the contraction of the auricle. The next wave, the Q. R. S. complex, is the wave of ventricular contraction. The final wave, the T wave, represents the end of the ventricle contraction and is the process of relaxation or diastole of the heart. Now our particular concern, also, is the distance between the beginning of the P wave (or the auricular wave), and the completion of the ventricular contraction. Another interval of interest and significance is the time between the end of the ventricle contraction and the end of its period of rest, until it starts over again. The third point of interest is the height and width and direction of these curves. There is a mathematical standard normal of time, of height, of distance, and of direction. Every change in every one of these four factors is of significance to the interpreter. They may be pathologic or they may not be. I am going to project a few slides of characteristic tracings so that you can see the marked deviation from normal that occurs in some of these tracings. I ask that you remember that there is little room here in the interpretations of these cardiograms for individual opinions, such as in the interpretation of an x-ray film. Electrocardiograms are algebraically correct and mathematically standardized. After these slides have been projected, I have six slides showing the chief reasons for your consideration of a wider use of the electrocardiographic means at your disposal in this community.

SUMMARY

In conclusion, so far as the text of this subject goes, just previous to the slides, may I once again answer the question: What has the electrocardiograph to offer the general practitioner? It has these fourteen important aids:

1. The recognition of auricular flutter, a serious pathologic heart condition.

2. It gives us the differentiation between auricular fibrillation and multiple extrasystoles.

3. It differentiates for us auricular from ventricular paroxysmal tachycardia.

4. It also differentiates between regularly occurring extrasystoles from partial heart-block.

5. One should hesitate to ascribe such symptoms as shortness of breath, palpitation, rapid heart, fatigue or chest pain, that is not typically anginal to heart diseases unless it can be demonstrated that the heart is abnormal. The real trouble may be secondary anemia, or pulmonary lesions, or perhaps a psychoneurosis. In such cases a distinctly abnormal tracing greatly increases the probability that no mistake can be made in attributing the symptoms to myocardial damage. In the course of an attack of rheumatic fever, and less often in the course of some other acute febrile illness, cardiograms may show evidence of myocardial involvement when other signs that the disease has attacked the heart are completely lacking.

6. In essential hypertension, changes in the heart are frequently detected by the electrocardiograph before cardiac signs and physical symptoms develop.

7. Cases of suspected angina pectoris, having normal electrocardiograms, substantially increases the probability that the tentative diagnosis is correct.

8. In coronary thrombosis the electrocardiogram is usually very characteristic and usually far more helpful than the physical examination of the heart, which is often entirely negative. You have all seen the wide variation in the pain of coronary disease. When it is abdominal, and surgery is in the offing, a cardiograph is of infinite value in the characteristic picture it usually gives us.

9. The electrocardiographic changes sometimes persist for years after the occurrence of myocardial infarcts, and in rare instances the cardiogram furnishes the only available evidence that an infarct has taken place.

10. Control of the administration of digitalis is desirable whether this drug is given rapidly or continued to the limit of tolerance. This is possible by means of occasional electrocardiographic examinations.

11. The electrocardiographic control of intensive treatment of auricular flutter or fibrillation with quinidin is almost imperative.

12. Last, but not least, it can detect myocardial disease at times when all other methods fail. For various reasons of travel, exertion, livelihood, legal aspects, etc., one often wants to know, if myocardial damage exists, how severe it is. The cardiogram is the final court of authority.

13. It is of value in prognosis.

14. It is of value in determining the present status of a patient for surgery, as well as his cardiac resistance to disease and his cardiac reserve.

It is fair to say that a cardiovascular examination is not complete without an electrocardiogram. I do not presume to persuade you, on the other hand, that it has magical, errorless, impossible powers. But it is an invaluable adjunct to our diagnostic armamentarium. It can give us important information that neither the hand nor the eye nor the ear can discover.

384 Post Street.

REFERENCE

1. Carter, J. B.: The Fundamentals of Electrocardiographic Interpretation, J. A. M. A., Vol. 99, No. 14, p. 1167 (Oct. 1), 1932.

DISCUSSION

Lewis Gunther, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Behnemann's paper shows the value of the electrocardiogram in detecting irregularities of the heart rhythm, and also hidden subclinical diseases of the ventricular muscles.

The greatest value of the electrocardiogram lies in its ability to teach the clinician the manner in which he may train his finger, his eye and his ear to detect the irregularities at the bedside. After a period of time, where close check is made on the clinical studies by electrocardiograms, the clinician may learn to accurately diagnose, or strongly suspect, more than 90 per cent of these irregularities, without having to resort to mechanical aids.

A situation in which the electrocardiogram, by giving collaborating evidence, proves itself to be a great teacher in clinical and bedside medicine, occurs in certain types of acute pericarditis, following acute upper respiratory infections with or without concomitant rheumatic fever. Patients in this group complain of a vague illness, consisting of malaise, perhaps a little fever, excessive rapidity of the pulse on the slightest exertion or physical activity. There are almost no physical findings, but still there exists a disability so far out of proportion to what the doctor finds clinically at the bedside, that one may be rightly puzzled at the validity of the patient's complaints.

However, detailed attention to auscultation at the base of the heart with the *Bell* stethescope, using adequate and forcible pressure on the skin, will often detect a faint, rather high-pitched short systolic crackling friction. This friction is sometimes easily audible, and sounds like the to-and-fro crackling noise produced when the corner of a sheet of very stiff paper is bent back and forth between the thumb and forefinger. The result of the electrocardiogram in such instances shows a striking inversion of the T waves, sometimes in all three leads, and the waves are often characteristically curved as in the Pardee coronary T wave. However, these patients rapidly resume a normal electrocardiogram after a week or ten days in bed, and thereafter rarely show evidence of disease of the ventricular muscles.

There is a tendency among many physicians to administer digitalis in heroic doses to any patient who has a rapid and regular pulse, as well as to those whose pulse is irregular and rapid. And when the patient vomits, the procedure seems to be to force it into the system by intramuscular injection. In the occasional patient who is sensitive to digitalis the danger is great. When patients with regular rhythms are closely followed by serial electrocardiograms under digitalis therapy, much to one's surprise it may be seen at times that full digitalization effect is seen on the T wave of the electrocardiogram, when only one-half of the calculated Eggleston's dosage has been administered.

In the experience of the writer it has not been unusual to find a patient with a well-developed ventricular tachycardia who has been given a full calculated digitalis dosage in a short period of time. Under these circumstances the writer has found it almost impossible to reverse the fatal tachycardia. It may be open to question as to whether or not the digitalis poisoning produced that particular episode; but it is a well-known fact that digitalis intoxication may result in a fatal ventricular tachycardia.

Therefore, in this writer's opinion, it is of utmost importance for the welfare of the patient that the general practitioner should acquaint himself with the exact mechanism of the rapid pulse by taking an electrocardiogram before such digitalis therapy is commenced. The delay occasioned by the procedure of taking an electrocardiogram when there is even the slightest question of the accuracy of the bedside diagnosis of the tachycardia, is far less serious than the routine use of digitalis in every rapid pulse rate.

In conclusion, therefore, the writer would again like to emphasize that the value of the electrocardiogram, as a teacher to the bedside clinician, cannot be overestimated.

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John J. Sampson, M. D. (490 Post Street, San Francisco).—The essayist has well outlined the numerous instances in which the electrocardiogram is of value to the practicing physician. Our outlook on the situation in 1935 is altered materially from that of ten years ago, when the only means of taking an electrocardiogram was with the large cumbersome machine to be had only in hospitals. Many portable models are now available that enable us to carry the study of certain problematic cases to completion at the patient's bedside, and this is especially true of acute coronary artery occlusion.

Unfortunately, interpretation of electrocardiograms is not always a very simple matter. Whereas characteristic pictures, such as deep inversion of T waves or the common forms of auricular fibrillation and ectopic beats, may be readily diagnosed with little training, border-line deviations from the normal are very likely to be either over- or underemphasized as to their clinical importance, without quite a reasonable amount of associated clinical and electrocardiographic experience. Often the slight deepening of Q waves, and depression or elevation of S-T intervals, may be the sole determining elements in establishing a diagnosis of acute coronary artery occlusion. On the contrary, slurred S waves and S-T intervals commonly occur in normal individuals, and are frequently misinterpreted as evidence of heart-muscle damage.

One must be cautious in reading too much of the clinical state of the patient from the electrocardiogram. After all, it is only a record of the nature of the excitation and contraction wave in passing through the heart, and tells practically nothing of the circulatory dynamics. It is not unknown to find individuals with organic heart disease involving one or more valves, and even with congestive or anginal heart failure, who have absolutely normal records although this occurrence is rare. Likewise, it is no more necessary to rush to the taking of an electrocardiogram on every case of heart disease where the diagnosis of anatomical and functional disturbances are clear than to take blood counts on every characteristic acute common cold.

Several years ago we estimated, in the laboratory of the University of California, that at least 80 per cent of the patients on whom electrocardiograms had been taken for either heart-muscle damage, arhythmia or miscellaneous disturbances such as pericarditis, were adequately diagnosed clinically prior to the taking of records. Thus, whereas I quite agree with Doctor Behnemann as to the many uses of this valuable technique and its absolute necessity in certain instances of heart disturbances, I must admit we should be well able to do without it in many instances if we use our clinical diagnostic and prognostic abilities.

CANCER OF THE RECTUM*

By William H. Daniel, M.D.

Los Angeles

Discussion *by Montague S. Woolf, M. D., San Francisco; William H. Kiger, M. D., Los Angeles; James W. Morgan, M. D., San Francisco.*

It is never amiss, in discussing cancer of the rectum, to emphasize the early symptoms, the disregard of which so often allows a curable case to become incurable. The most common are bleeding, which may occur late; change in bowel function, such as constipation or frequency; loss of weight; discomfort and pain. Many of these cases have been treated for colitis, amebiasis, injected for hemorrhoids, or subjected to colon irrigations without digital or proctoscopic examination, by which 100 per cent of these lesions are demonstrable. The negative barium enema should not be regarded as diagnostic, since the majority of tumors of the rectum do not show a filling defect. It is unfortunate that the majority of the rectal cancers occur in the silent roomy ampulla, or the rectosigmoid, and are not suspected until extension to adjacent or distant organs has taken place, or the systemic effects are such that a radical operation is hazardous.

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* Read before the General Surgery Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

BIOPSY

It is believed that cancer of the rectum begins in the mucosa, and that adenomata, and polypi, especially those with a broad base, are potential carcinomata. Microscopic examination of tissue is indicated to confirm the diagnosis, and to determine the grade of malignancy. A negative report is a demand for another biopsy, especially if the growth feels and looks like cancer.

INDICATIONS FOR OPERATION

Operability depends upon many factors, the most important of which are: the condition of the patient, and the experience and ability of the surgeon. A rectal cancer should be considered operable when it may be removed in its entirety, without unduly jeopardizing the life of the patient; or when, even in the presence of moderate metastases, its removal will prolong the life of the patient with mental and physical comfort.

The majority of these patients are between the ages of fifty and seventy-five years. Radical one- or two-stage operations must be considered with care in those over sixty. In those under thirty, all methods of treatment are usually inadequate, and the most radical procedure is indicated.

Moderate metastasis in the liver does not forbid surgical removal of the tumor. The patient who knows his cancer is gone is much more comfortable and hopeful.

The welfare of the patient is the chief consideration in the treatment, which has as its object the complete eradication of the disease, or the maximum extension of useful life with mental and physical comfort. The surgeon should not have a fixed rule as to choice of operation, but should be guided by the physical and laboratory findings. He should not attempt to treat all cases by any one method, as no one procedure is applicable in all cases. The tumor may be small, low, and movable, and yet be highly malignant. The size of growth is no indication of metastasis. The lesion growing into the bowel wall is more prone to metastasize than one extending into the lumen. A growth may be easily resectable, but the condition of the patient, or the presence of metastases, make the effort useless. The condition of the heart and blood pressure may contraindicate suitable anesthesia and a prolonged surgical procedure.

CHOICE OF SURGICAL PROCEDURES

After the patient has been put in as good condition as possible, the surgeon must then choose the procedure which, in his opinion, offers the most for that particular patient. The five most common surgical methods are: (1) Abdominoperineal resection of the sigmoid and rectum in one or two stages; (2) colostomy and perineal resection; (3) colostomy and posterior excision; (4) local excision; (5) colostomy, palliative only.

The abdomen should be explored, unless there is some definite contraindication, to ascertain the presence of metastases. A colostomy is always indicated unless the growth is low and small, and of low malignancy, and local resection offers a reasonable chance for cure. An incontinent rectum is much more disagreeable than an abdominal anus. The colostomy patient should not be an object of pity, for he quickly becomes accustomed to the slight inconvenience. A selected diet makes its care fairly simple.

SURGICAL PROCEDURE MUST BE SUFFICIENTLY RADICAL

To be successful, every procedure must be sufficiently radical to remove all the growth and lymphatic channels. The abdominoperineal resection of the sigmoid and rectum is the ideal procedure, because more of the lymphatic structures are removed. Although the mortality rate may be higher, the possibility of recurrence is less. The one-stage operation is the most ideal, if the risk to the patient is not too great. The percentage of operability is much less than in the two-stage operation. The two-stage method is much less dangerous, since the patient has a chance to recover from the colostomy operation, before the more drastic procedure is undertaken. Bowel function is restored, the patient's food and water intake become more normal, and the inflammatory process about the tumor may subside, allowing safer removal. If there is any marked degree of obstruction, or the growth large or fixed, the two-stage method is the one of choice.

The colostomy and posterior resection method is favored when the growth is low and the patient a poor risk or advanced in years. Perineal excision without colostomy has been discarded by most surgeons as being inadequate. In some medical centers in Europe, posterior excision with perineal anus is still the method of choice. Local excision with cautery is satisfactory in a very limited field. Recurrences are common, because ordinarily the lymphatics within the peritoneal cavity are not removed.

ADENOMATA AND POLYPI

Adenomata and polypi, no matter how small, should be regarded as possible cancer, a section taken for microscopical examination, and the tumor treated thoroughly with the cautery. In cases of malignant polypi, the question arises whether to perform radical operation or to attempt local removal. If the mass is small, and movable, treatment with the cautery may be sufficient. On the other hand, this procedure may be wholly inadequate because metastases may already be present, or the cancer cells may have extended beyond reach of the heat. If it is reasonable to assume that invasion of other tissue has already begun, radical operation is indicated. The question is a difficult one to answer, and the surgeon may have cause to regret either procedure that he may select.

RADIATION THERAPY

Radiation in all its forms is still a matter of controversy. The value of radium has been a topic of disagreement for many years. Binckley states that the treatment of rectal cancer remains a surgical problem, but radium and deep-radiation are important aids to surgery.

ANALYSIS OF AUTHOR'S CASES

The foregoing opinions have been formulated from a study of a large number of articles in the literature dealing with this subject, and from examination and observation of approximately 240 cases. More than one-half of this number were treated personally.

There were twelve patients, or 5 per cent, below thirty years of age, and twenty-seven, or 11 per cent, below forty years of age. In this group only three below thirty years were operable, and only two are living. There are five living below forty years of age. All of these had the abdominoperineal resections. The remainder were either inoperable when seen, or had a recurrence from a previous operation. Practically all in this group were of high-grade malignancy. Sixteen per cent were over seventy, and 40 per cent over sixty, leaving 50 per cent in the most favorable period, from forty to sixty years of age.

There were 158 biopsies recorded, and 120 were graded as follows: low—9 per cent, moderate—33 per cent, and high—58 per cent. Adenocarcinoma occurred in 91 per cent, epidermoid in 6 per cent, and 3 per cent were undifferentiated. Metastases were present, as a rule, in the high grade, though there were several in the moderate group. In several cases, it was necessary to do repeated biopsies, at times surgically, to make a positive diagnosis. Specimens of the same tumor may vary in grade. One biopsy was reported as Grade I, and a block from the surgical specimen was reported as Grade IV. We believe that the grading of tissue is of benefit in the prognosis as to recurrence, and in the choice of operation. The higher the grade, the more radical should be the procedure. Recurrences occurred usually in the high grades. In the whole group, according to available information, there have been nine recurrences from local and perineal excision, and two from abdominoperineal procedures.

There is an apparent variance between our operability figures and those reported in large clinics. Perhaps it is because there are more quacks, cults, and fake cures, in Southern California than elsewhere. In the clinic cases, only 35 per cent were operable, and in the private cases, 60 per cent operable. Estimated operability in the group as a whole compared closely with operability determined by exploration, namely, 45 per cent operable, and 55 per cent inoperable.

Experience with those patients having had deep radiation was limited. The results were disappointing, to say the least, the chief one being an unnecessary postponement of an inevitable demise.

There were several secondary involvements of the rectum from cancer of the cervix and prostate, and four which were considered to be implantations from carcinoma of the stomach.

The following procedures have been carried out: abdominoperineal, 22; colostomy posterior resection, 17; colostomy posterior excision, 11; local cautery excision, 9; anterior resection, 1; cautery through proctoscope, 8; colostomy, 62. There was a mortality of 16 per cent in the completed radical procedures.

IN CONCLUSION

In concluding, it is the desire to leave the thought that all colon and rectal disturbances, however slight, may mean cancer. The time for cure is in the early stages, and only by conscientious examination may these be discovered. The yearly examination of every person over forty is ideal, but impractical. We should not consider our mortality rate when the welfare of the patient is at stake. It is more justifiable to have a surgical death in the attempt to completely eradicate this disease, than to have a rapid recurrence. In case of failure, the greater service may have been rendered the patient and his family. Sane, radical surgery offers the greatest hope.

1930 Wilshire Boulevard.

DISCUSSION

Montague S. Woolf, M. D. (384 Post Street, San Francisco).—In a short space Doctor Daniel has set forth many items of interest concerning cancer of the rectum. In the past, some patients came too late to the surgeon on account of the referring physician. The latter did not then avail himself of a digital examination, though it was suggested by the complaint. The patient complained of bleeding from the rectum, said he had piles, and was believed. This meant that many a patient suffering from carcinoma was treated on the diagnosis of the patient and, consequently, was allowed to live with his growth until it became inoperable. More recently the referring physician has come to realize that 80 per cent of cancers originating even as high as the rectosigmoid junction can be felt by the examining finger. The remaining 20 per cent could also be diagnosed by a physician, if a sigmoidoscope or a barium enema were used. In other words, the diagnosis of carcinoma of the rectum is not difficult. But still there are numerous patients who come too late to any physician. It is they who have to learn now that bleeding from the rectum can be very much more serious than hemorrhoids, and that only a physician can differentiate between the two lesions. Another reason why carcinoma is overlooked is that the age of the patient and the obstructive lesion in the rectal wall predispose to hemorrhoids. Therefore, the two conditions will more often than not occur concurrently.

Diagnosis must precede treatment, and a poor attempt at the former will lower the operability for cancer of the rectum. Doctor Daniel's operable figure of 45 per cent is too low for us to be satisfied. This figure does not seem to be much over 60 per cent in the very largest centers for this work. It seems important to let the public know not that surgery is still the only treatment of cancer, but that cancer is curable by surgery. This implies that an individual ought to have a complete physical examination at least three times a year, especially when he reaches forty years of age. This part of the subject is one of education. Better-placed individuals are more often cured of cancer than those poorer, and it is not entirely a matter of money. Education teaches an individual the facts of a situation and, more important, helps him to discriminate between them. Bleeding from the rectum, therefore, in one case will mean only "piles," in another many forms of intestinal disorder, among which cancer will be significant.

The primary and recurrent mortality of cancer in any region will, therefore, be lessened as the public becomes educated, and according to the development of expert surgery on the part of the physician. As far as the surgeon is concerned, great progress has been made in the surgical treatment of cancer of the rectum. Of operable cases less than 11 per cent can be the primary mortality in one of surgery's greatest operations, namely, the modern abdominoperineal procedure in one stage. This was formerly over 40 per cent in the hands of the originator. Five-year survivals from this operation are considerably over 50 per cent. The tragedy of the final results lies in the fact that not much over 50 per cent are operable when patients with the disease see the surgeon.

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William H. Kiger, M.D. (1930 Wilshire Boulevard, Los Angeles).—There is one point that Doctor Daniels has mentioned that cannot be stressed too much, and that is, early diagnosis. We know that cancer remains local in this locality longer than anywhere else. There seems to be a lack of appreciation of this fact on the part of many of the profession, and many sufferers from this disease have been allowed to waste months of valuable time because their family physician did not take the trouble to make a digital examination of the rectum. If a patient complains of blood in the stool, it should always be thoroughly investigated. If it is fresh red blood, it is quite sure to come from low down in the bowel; darker, higher up. This examination should be made routinely: first, digital; second, anascope; third, proctoscope; and, if necessary, barium enema, and always the enema before a barium meal. The radical one- or two-stage abdominoperineal is undoubtedly the operation of choice and the one that has given the most satisfactory results. The one-stage is preferable when possible.

There is another point which I think important, and will help these unfortunates to decide to submit to surgery after the diagnosis is made, and that is to overcome their dread of a colostomy. I have heard many patients, and the opinion was concurred by their family physician, say they would rather die than have a colostomy. A good colostomy, properly cared for, gives the patient very little trouble, and they are able to lead their regular lives. Their education requires a little time, and patience on the part of the surgeon, but it is well worth the time to all parties concerned.

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James W. Morgan, M. D. (384 Post Street, San Francisco).—Doctor Daniel's paper emphasizes the importance of early symptoms. At the University of California we spend a great deal of time teaching diagnosis to undergraduate and postgraduate students. We stress thorough investigation. The practitioner does not like to be reminded of his shortcomings, and he therefore resents our constant repetition of the term "adequate rectal examination." In the past six weeks, four patients with *palpable* rectal cancers have been sent to me. I have operated upon all of them, but I feel quite sure that they should have come earlier. Three of them had had local operations, two for hemorrhoids, and one for fistula. I was able to do radical operations for all of these patients, and their outlook is good; but the prognosis would have been much better if they had come in earlier. Forgive me, then, for repeating Moynihan's dictum: "In all cases of pain between the nipple and the knee, examine the rectum."

Except in rare instances, the patient deserves a very radical operation. The small early growth is no exception, for here is our best chance for complete cure. There is still much to be learned about carcinoma of the rectum, but the remarkable improvement in prognosis during the past few years is one of the outstanding accomplishments of surgery. We can now truthfully say that about half of the patients who present themselves early with malignant tumors of the lower colon and rectum can be cured.

HARRISON NARCOTIC LAW[*][†]

DECISION OF THE DISTRICT COURT OF THE UNITED STATES IN: U. S. A., PLAINTIFF, VS. EDWARD H. ANTHONY, DEFENDANT

IN THE DISTRICT COURT OF THE UNITED STATES IN AND FOR
THE SOUTHERN DISTRICT OF CALIFORNIA
CENTRAL DIVISION

UNITED STATES OF AMERICA, Plaintiff, vs.
E. H. ANTHONY, et al., Defendants.
No. 12069-Y, 12070, 12071, 12072, Criminal

Appearances:

Peirson M. Hall, Esq., United States Attorney, by Howell Purdue, Esq., Deputy United States Attorney, Attorney for the Plaintiff.

Ames Peterson, Esq., Attorney for the Defendants.

In four indictments containing sixteen counts returned on August 30, 1934, the defendant E. H. Anthony, a physician, duly licensed to practice medicine in the State of California, and duly registered with the Collector of Internal Revenue for the Sixth District of California, and others were charged with the violation of Sections 1040 and 1044a of Title 26, U. S. C. A., commonly known as the Harrison Narcotic Act. Each of the counts, in effect, charged that the defendant and a certain druggist did sell, barter and dispense unlawfully certain quantities of morphin sulphate, not in good faith and not in the course of their professional practice. The indictments were dismissed as to the druggist. Four conspiracy counts contained in the indictments were also dismissed. A first trial had before the court with a jury, resulted in a disagreement. The second trial was had before the court without a jury.

The evidence upon the part of the Government showed that the defendant had prescribed quantities of morphin sulphate to four known addicts, James E. Jensen, Peter Mayers, William Avery and Joseph Tint, the persons named in the indictments. The times and the amounts were as follows:

In the case of James E. Jensen: June 16, 1934, 125 ½-grain tablets of morphin sulphate (with the direction, "Dissolve and use as directed"); June 19, 1934, 120 ½-grain tablets morphin sulphate (same directions); June 23, 1934, 90 ½-grain tablets morphin sulphate (same directions); June 27, 1934, 115 ½-grain tablets morphin sulphate (same directions); July 3, 1934, 120 ½-grain tablets morphin sulphate (same directions); July 8, 1934, 120 ½-grain tablets morphin sulphate (same directions): July 14, 1934, 120 ½-grain tablets morphin sulphate (same directions); July 18, 1934, 120 ½-grain tablets morphin sulphate (same directions); July 23, 1934, 110 ½-grain tablets morphin sulphate (same directions); July 28, 1934, 120 ½-grain tablets morphin sulphate (same directions).

In the case of Peter Mayers: June 11, 1934, 168 tablets ½-grain tablets morphin sulphate (with the direction, "Emergency L. A. Clinic"); June 18, 1934, 168 ½-grain tablets of morphin sulphate (same directions); June 25, 1934, 168 ½-grain tablets morphin sulphate (with the direction, "Dissolve and use as directed"); July 2, 1934, 168 ½-grain tablets morphin sulphate (same directions); July 8, 1934, 84 ½-grain tablets morphin sulphate (same directions); July 16, 1934, 100 ½-grain tablets morphin sulphate (same directions); July 23, 1934, 84 ½-grain tablets morphin sulphate (same directions); July 28, 1934, 30 ½-grain tablets morphin sulphate (same directions); July 30, 1934, 84 ½-grain tablets morphin sulphate (same directions).

In the case of William Avery: June 11, 1934, 150 ¼-grain tablets of morphine (with the direction, "Emergency L. A. Clinic"); June 14, 1934, 75 ¼-grain tablets morphin sulphate (same directions); July 8, 1934, 20 ¼-grain tablets morphin sulphate (with direction, "Dissolve and use as directed").

In the case of Joseph Tint: June 13, 1934, 120 ½-grain tablets of morphin sulphate (with the direction, "Dissolve and use as directed"); June 20, 1934, 110 ½-grain tablets morphin sulphate (same directions); June 26, 1934, 110

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[*] From the press of the Los Angeles City Health Department, Los Angeles, 1936.

[†] This decision is given space in the original article section of California and Western Medicine so that it may more easily find its place in the index of medical literature. See also in this issue, comments on page 115.

½-grain tablets morphin sulphate (same directions); June 29, 1934, 40 ½-grain tablets morphin sulphate (same directions); July 2, 1934, 168 ½-grain tablets morphin sulphate (same directions); July 7, 1934, 84 ½-grain tablets morphin sulphate (same directions); July 9, 1934, 84 ½-grain tablets morphin sulphate (same directions); July 13, 1934, 84 ½-grain tablets morphin sulphate (same directions); July 2, 1934, 168 ½-grain tablets morphin sulphate (same directions); July 20, 1934, 84 ½-grain tablets morphin sulphate (same directions); July 23, 1934, 60 ½-grain tablets morphin sulphate (same directions); July 26, 1934, 75 ½-grain tablets morphin sulphate and 1 needle (same directions); July 30, 1934, 120 ½-grain tablets morphin sulphate (same directions).

Dr. Thomas A. Orbison, a neuro-psychiatrist, testifying for the Government, in answer to a hypothetical question, stated that the prescribing of the morphin under the circumstances to these four men and in the amounts given was not proper medical practice. Dr. C. H. Thienes, head of the Department of Pharmacology. at the Medical Department of the University of Southern California, gave a like opinion. They both expressed the view that the ambulatory treatment of drug addicts was not proper medical practice under any circumstances. The testimony of the defendant's witnesses will appear in greater detail in the opinion of the court finding the defendant not guilty.

* * *

YANKWICH: District Judge. (orally, after stating the facts as above.)

When a judge tries a case of this character, unless there be a question of law or the examination of documents which require further study, he should be in a position at the conclusion of the case to announce his verdict. Perhaps it would be just as well if practice allowed judges trying criminal cases without a jury to render their verdict without giving any reasons. However, the common practice has grown up, both in the State and Federal Courts for judges, in determining criminal cases, to state their reasons. Whether it is a good practice or not, I do not know. I have followed it at all times.

I think I followed this case very closely. We have discussed problems of law as they came along. I realize a case of this character is of great importance to the Government and to the defendant. Ultimately the Harrison Act is an important statute. It was passed in 1914. It has been before the Courts on many, many occasions, and has been sustained. It has, in many instances, and in many respects been declared a great success. It has been followed, as a matter of fact, by statutes in various states, supplementing it so as to cover the situations which could not be handled under the Act.

Everyone is satisfied that the Harrison Act has been noteworthy in destroying or minimizing the nefarious traffic in narcotics. It has been very successful in reaching the peddler, who, for many years, has been the great source of illegitimate supply, to such an extent that whether administering the State laws or whether administering the Federal law, judges have drawn the line between the addict who may be found with illegally obtained drugs in his possession and the peddler who, for a consideration, supplies the need and barters upon what has been here declared to be a disease. And in dealing out punishment I think the Courts, as a rule, have distinguished between the two conditions, treating one as a diseased and unfortunate and the other as a mercenary trafficker in drugs.

I am making the remarks to indicate why I consider a prosecution under this Act important from the standpoint of the Government. Ultimately, of course, we have to administer the law as we find it. We go back to the old Latin phrase that the province of the Court is *jus dicere* not *jus dare*; to pronounce the law, as we find it, not to make the law or to give the law.

The prosecution in this case is not the prosecution of a lay peddler but the prosecution of a physician for having trafficked in narcotics. A physician is within the exceptions to the prohibitions of the State statute which is now codified as Section 1044, Title 26, U. S. C. A. The statute itself provides:

> It shall be unlawful for any person to sell, barter, exchange, or give away any of the drugs mentioned in Section 1040 (a) except in pursuance of a written order of the person to whom such article is sold, bartered, exchanged, or given, on a form to be issued in blank for that purpose by the commissioner.

Section 1040, to which reference is made in that section, provides:

> There shall be levied, assessed, collected, and paid upon opium, coca leaves, any compound, salt, derivative, or preparation thereof, produced in or imported into the United States, and sold, or removed for consumption or sale, an internal revenue tax at the rate of 1 cent per ounce, and any fraction of an ounce in a package shall be taxes as an ounce.

The exception which is in paragraph (c) of Section 1044 U. S. C. A. Title 26, says:

> Nothing in this chapter shall apply . . . (1) To the dispensing or distribution of any of the drugs mentioned in Section 1040 (a) to a patient by a physician, dentist, or veterinary surgeon registered under Section 1384 in the course of his professional practice only.

The statute has been sustained as a revenue statute chiefly. And in the various decisions to which reference has been made during the course of the discussion here, particularly in *United States* vs. *Doremus*, (1919) 249 U. S. 86, a majority of the Court sustained the Act upon the ground that it is not an invasion of the province of the State; that it is a revenue measure only and that the moral ends of the statute are incidental only. Mr. Chief Justice Taft, Justices McKenna, Van Devanter, and McReynolds expressed the view, to which they have adhered, that the Act was not a revenue act, was an invasion of the province of the States, and was, therefore, unconstitutional.

I merely am referring to these facts in order to indicate that we must bear in mind the purpose of the Act—that the Act is a borderline statute which must be interpreted in such a manner as to bring it within the constitutional power. And if we depart from it and interpret it either as attempting to regulate the disposition and sale of narcotics or attempting the regulation of medicine, we extend the Act to the realm which the Supreme Court has repeatedly said the Federal Government cannot enter, under the penalty of unconstitutionality.

The Linder case (*Linder* vs. *United States* (1925) 268 U. S. 5) is very important in determining this case. We all seem to agree, whether we read it alike or not, that it determines this case, so far as the law is concerned. I do not wish to refer at the present time to the portions of the Linder case which determine *what*, if any, prescriptions for narcotics a physician may give to an addict. I wish to refer to it for the present for the purpose of pointing out that the moment we assume that this Act *regulates the sale* within the State of narcotics and that it aims to regulate the practice of medicine we must hold it unconstitutional.

In the Linder case, Mr. Justice McReynolds, speaking for the Court, made this observation:

> Obviously, direct control of medical practice in the States is beyond the power of the Federal Government. Incidental regulation of such practice by Congress through a taxing act cannot extend to matters plainly inappropriate and unnecessary to reasonable enforcement of a revenue measure. The enactment under consideration levies a tax, upheld by the court, upon every person who imports, manufactures, produces, compounds, sells, deals in, dispenses or gives away opium or coca leaves or derivatives therefrom, and may regulate medical practice in the States only so far as reasonably appropriate for or merely incidental to its enforcement. It says nothing of "addicts" and does not undertake to prescribe methods for their medical treatment. They are diseased and proper subjects for such treatment, and we cannot possibly conclude that a physician acted improperly or unwisely or for other than medical purposes solely because he has dispensed to one of them, in the ordinary course and in good faith, four small tablets of morphin or cocain for relief of conditions incident to addiction. What constitutes bona fide medical practice must be determined upon consideration of evidence and attending circumstances. Mere pretenses of such practice, of course, cannot legalize forbidden sales, or otherwise nullify valid provisions of the statute, or defeat such regulations as may be fairly appropriate to its enforcement within the proper limitations of a revenue measure. (Linder vs. United States, supra at 5).

Further on in the opinion, referring to the Webb case (*Webb* vs. *United States* (1919) 249 U. S. 96) which Mr Howell Purdue, the Assistant United States Attorney, has mentioned in his concluding remarks, the Court limits the language of that decision which was first interpreted as meaning that *no* prescription to an addict could be justified under the Act, and says:

> The question specified no definite quantity of drugs, nor the time intended for their use. The narrated facts show, plainly enough, that physician and druggist conspired to sell large quantities of morphin to addicts under the guise of issuing and filling orders. The so-called prescriptions were issued without consideration of individual cases and for the quantities of the drugs which applicants desired for the continuation of customary use. The answer thus given must not be construed as forbidding every prescription for drugs, irrespective of quantity, when designed temporarily to alleviate an addict's pains, although it may have been issued in good faith and without design to defeat the revenues.

Further on in the opinion, talking about the Behrman case, also referred to by Mr. Purdue, (*United States* vs. *Behrman*, (1922) 258 U. S. 280) and interpreting some of the language contained in it, the Court says:

> This opinion related to definitely alleged facts, and must be so understood. The enormous quantity of drugs ordered, considered in connection with the recipient's character, without explanation, seemed enough to show prohibited sales and to exclude the idea of bona fide professional action in the ordinary course. The opinion cannot be accepted as authority for holding that a physician, who acts bona fide and according to fair medical standards, may never give an addict moderate amounts of drugs for self-administration in order to relieve conditions incident to addiction. Enforcement of the tax demands no such drastic rule, and if the Act had such scope it would certainly encounter grave constitutional difficulties.
>
> The Narcotic Law is essentially a revenue measure and its provisions must be reasonably applied with the primary view of enforcing the special tax.

In a subsequent case, *Nigro* vs. *United States* (1928) 276 U. S. 332, Mr. Chief Justice Taft, writing the opinion for the Court, in answering certain certified questions by the Eighth Circuit Court of Appeals came back to the subject of interpretation of the Act, saying at page 341:

> In interpreting the Act, we must assume that it is a taxing measure, for otherwise it would be no law at all. If it is a mere act for the purpose of regulating and restraining the purchase of the opiate and other drugs, it is beyond the power of Congress and must be regarded as invalid, just as the Child Labor Act of Congress was held to be, in Bailey, Collector vs. Drexel Furniture Company, 259 U. S. 20.

So we have in these cases the two limitations which the Court has placed upon the Act—two statements which hold the Act must not be interpreted as endeavoring to regulate the local sale of drugs, or as an attempt upon the part of the Federal Government to regulate the practice of medicine.

The Linder case also lays down the rule which, to my mind, is very clear and is made clearer by subsequent cases which have interpreted it—that the Act does not attempt to tell how much a physician may prescribe to an addict. We must bear in mind in reading the Linder case that the Court there was not passing upon a case after trial. The Court was merely dealing with the sufficiency of an indictment which charged one delivery to a person and did not even charge a sale. So that what the Court said about four grains or about a moderate amount, must be interpreted in the light of that fact. In fact, its own language, in interpreting the Webb case, intimates that it does not intend to delimit either the quantity or frequency with which a physician in his practice may prescribe. Such an attempt would make the Court the arbiter of the practice of medicine. In *Strader* vs. *United States*, (C. C. A. 10, 1934) 72 F. (2) 589, the Court, in commenting upon a statement of the trial judge to the effect that the prescription to an addict is a violation of the law, and that the statute provided it may not be given merely for the purpose of relieving pain incident to addiction, said:

> We think the court incorrectly stated the law and unduly circumscribed the testimony. The statute does not prescribe the diseases for which morphin may be supplied. Regulation 85 issued under its provisions forbids the giving of a prescription to an addict or habitual user of narcotics, not in the course of professional treatment, but for the purpose of providing him with a sufficient quantity to keep him comfortable by maintaining his customary use. Neither the statute nor the regulation precludes a physician from giving an addict a moderate amount of drugs to relieve a condition incident to addiction, if the physician acts in good faith and in accord with fair medical standards.

I do not think that the case of DuVall against the United States (C. C. A. 9, 1936) 82 F. (2) 382, contains anything which detracts from that interpretation of the law. The Court there cites the Strader case. The Court there was not dealing with the question of the sufficiency of the testimony. The Court dealt merely with the instructions given by the trial judge. This is the instruction which the Court approved:

> If the prescriptions were issued in good faith and according to fair medical standards, in the curing of disease, and not merely to satisfy the cravings of the said persons for such drug, then they may be said to have been issued in the course of the defendant's professional practice only; but if the prescriptions were not issued in good faith, but were issued to enable such person to obtain morphin sulphate to satisfy his appetite and cravings for such drugs only, and not in the treatment of his patient, then the issuance of such prescriptions would not be in good faith nor in the course of the defendant's professional practice as a physician, and the sale and dispensing upon such prescriptions would not be lawful.

The Court then continues:

> Furthermore, although the court in its charge quoted the departmental regulation authorizing the supplying of morphin to aged or infirm addicts whose collapse would result from the withdrawal of the drug, provided he endorsed on the prescription that the patient is aged and infirm (giving age), or if he prefers he may endorse Exception 2, Article 85; the jury was nevertheless instructed to acquit notwithstanding the fact that the addict in the case at bar was only thirty-one years of age, if the prescription was made in good faith and in the course of the professional practice of the physician.

In the other case to which reference has been made, *Grigg* vs. *Bolton*, (C. C. A. 9, 1931) 53 F. (2) 158, the opinion was written by our colleague, Judge William P. James. There the question arose upon a writ of habeas corpus. It was a writ brought against the United States Marshal for the District of Montana claiming that the petitioner was being restrained under an indictment which charged him with no offense. We know the limited inquiry in such cases. On the face of the indictment, Judge James, writing for the Circuit, held that it stated an offense. He cited the Webb case and he cited the Jin Fuey Moy case. He did not cite the Linder case. I am satisfied that the decision was correct because the offense charged distinctly a sale and a conspiracy to violate the Act by unlawfully selling, bartering, exchanging and dispensing and possessing narcotic drugs to-wit, morphin sulphate, in violation of the law.

I am satisfied, therefore, that the Linder case and the cases which interpret it, lay down the rule definitely that the statute *does not say what* a physician may prescribe to an addict. Nor does it say the *quantity* which a physician *may* or *may not* prescribe. Nor does it regulate the *frequency* of prescription. Any attempt to so interpret the statute, by an administrative interpretation, whether that administrative interpretation be oral, in writing, or by an officer or by a regulation of the department, would be not only contrary to the law, but would make the law unconstitutional as it would be clearly a regulation of the practice of medicine.

The Courts have wisely held in determining what was or what was not the test of professional practice, that it should be determined in the light of expert testimony, in the light of the particular need of the particular occasion. In the case which followed the Linder case, *Boyd* vs. *United States* (1926) 271 U. S. 104, the Court limited the Linder case and criticized an instruction of the trial judge which would have limited the prescriptions to an addict to a single dose. The syllabus says:

> The mere fact that the quantity of morphin dispensed by a registered physician by a prescription to a morphin

addict without a written order, exceeds what would be required by the patient for a single dose, does not constitute a violation of the Anti-Narcotic Act.

The Court stated that the instructions of the trial judge in that case had language in it which went counter to the Linder case, but that certain other instructions cured the error of the others. The instructions were:

> I am requested to say to you, gentlemen, that in determining whether or not the defendant in prescribing morphin to his patients was honestly seeking to cure them of the morphin habit, while applying his curative remedies, it is not necessary for the jury to believe that defendant's treatment would cure the morphin habit, but it is sufficient if defendant honestly believed his remedy was a cure for this disease.
>
> I instruct you that if this is true, regardless of whether the course of treatment given by this defendant is a cure, the question is, was he honestly and in good faith in the course of his professional practice and in an effort to cure disease issuing these prescriptions.

The Court commented:

> With that addition the charge elicited no criticism or objection from the defendant, although there was full opportunity therefor. It evidently was regarded as consistent and satisfactory.

I have gone into this detailed discussion because Mr. Purdue, in the course of his argument, has stated it as his opinion that even if Dr. Anthony followed the school of thought which justified the prescription of narcotics under the circumstances and in the quantities prescribed, that, nevertheless, the prescription of large amounts to addicts would amount to a violation of the law, irrespective of his beliefs.

I cannot so interpret the meaning of the law. If I did, it would make the question of good faith not one to be determined upon the basis of the evidence, and expert testimony. We would have a situation where the Courts would arbitrarily say that, irrespective of the belief of the physician that he is effecting a cure or properly prescribing narcotics, the amount is excessive and is ipso facto a violation of the law.

Nor do I find in these cases anything to justify the statement of Mr. Purdue that the dispensing by physicians must be limited to an immediate need and that a physician cannot give to a patient a large prescription for self-administration under certain circumstances . . . warranted either by impossibility of hospitalizing the patient, or other conditions or by the desire to continue him at his work. . .

Nor can I find in these cases any statement of the law which says that where the physician is satisfied, from the patient's history and his own cursory examination, or where that patient is suffering from narcotism or other pathological conditions that require to be relieved medically by drugs, that he cannot rely upon the judgment of a duly established clinic maintained for a time by the City of Los Angeles, but must, because the Chief of Police and the narcotic officers have so requested, reexamine each individual case under the penalty of being prosecuted for violation of this act.

On the contrary, a study of these cases leads me to the conclusion that there is no dogmatic rule which the courts have laid down for the purpose of determining what is good or bad professional practice. What is good or bad professional practice must be established by the same rule by which the Courts determine whether malpractice exists in a certain case. In determining whether malpractice exists or not the Courts of California and the Courts of every state of the United States have laid down the rule, that a physician is not a guarantor of cure; that he is not a guarantor of even diagnosis; that he merely warrants by his employment that he will exercise ordinary care, the ordinary care of the physicians in his locality or in similar localities. Furthermore, the law of California is that what is good practice in a particular case is not to be determined by any abstract concept but by the opinion of experts whose testimony may be given in Court.

In a leading case on the subject in California, *Patterson* vs. *Marcus*, 205 Cal. (1928), at 533, the Supreme Court says:

> It has been held in this state that the implied contract on the part of the physician is that he possesses that reasonable degree of learning and skill possessed by others of his profession, and that he will exercise reasonable and ordinary care and skill in the application of that learning to accomplish the purpose for which he is employed. As to what is or is not the proper practice is uniformly a question for experts and can be established only by their testimony.

Reference is there made also to *Perkins* vs. *Trueblood*, (1919) 180 Cal. 437, where this is said:

> In McGraw vs. Kerr, 23 Colo. App. 163 (128 Pac. 873), it is said: "Negligence on the part of a physician consists in his doing something which he should not have done, or in omitting to do something which he should have done." Quoting further from the same case: "The authorities are practically uniform in holding that as to what is or is not proper practice in examination and treatment, or the usual practice and treatment, is a question for experts, and can be established only by their testimony."

So that, ultimately, the Court, in this case, is confronted with the duty of determining, from the evidence whether there is evidence in the record showing beyond a reasonable doubt that the treatment given to these addicts was not proper professional treatment under the circumstances, or, to put it conversely, whether the evidence establishes the fact, or raises a reasonable doubt that it is proper medical treatment.

I think Judge James, who tried this first case, correctly stated the law of the subject when he said, in his instructions to the jury:

> The law does not prohibit a physician from prescribing to an addict for self-administration, for the purpose of relieving conditions mental or physical which may be the product of addiction to the drug, or otherwise caused, such reasonable amounts, one dose or a number of doses of morphin, as fair medical standards recommend. In doing this the physician must act with the honest belief, based upon his medical knowledge, that the case reasonably requires such treatment. He is not to be held accountable for a mere error of judgment in such a case, or be held responsible to the law merely because results are not as favorable as he expected or anticipated. His responsibility is different, and he will be held accountable under the law, if he not using his best medical judgment in determining that the patient is in need of the treatment, issues prescriptions at the request of an addict merely to furnish such a supply of the drug as the addict may desire, in return for compensation received, or even without compensation. The last situation would be one that may be defined as an unlawful furnishing of narcotics and would be within the prohibitions of the law we are here applying.
>
> In determining whether a physician has acted in good faith in prescribing morphin for a patient, you are to consider what the accepted opinion of the medical profession is upon that point—if reputable physicians honestly hold to two opinions, some justifying the administration of morphin in the manner and in the quantities shown to have been administered by Doctor Anthony to the subjects named in the indictment, and others are honestly opposed to such opinion, and if the defendant held honestly to the opinion shown to be that of one group of reputable medical practitioners, and in the best of good faith acted accordingly, he would not be guilty. You have that question to decide and you are required to make up your judgment on the evidence submitted to you. Good faith on the part of the accused is an all-important element in the offenses charged—good faith according to fair or reasonable medical standards as understood by him. If you have a reasonable doubt as to what fair medical practice would require in the cases treated by the defendant, but find that the defendant believed he was acting according to good medical standards, he would be entitled to an acquittal. The purpose of the law, in making the exception as to practicing and registering physicians, is to allow the medical profession the right to prescribe such narcotic drugs as the necessary needs of their patients, in their honest judgment, require.

What the law punishes is *not bad judgment* in a physician, *but bad faith*. And the bad faith must appear. I agree with counsel for the Government that circumstances may arise, where, from the unexplained number of prescriptions, the unlimited amount, the relationship of the parties, an inference of bad faith might be drawn without any other evidence. But I do not think that the law compels such a conclusion as a finding—a dogmatic, irrevocable conclusion—to be drawn in all cases where the prescription is not limited to one dosage or several dosages. Where there is an explanation, the law relegates us to the position of having to determine, as the trier of facts, in the light of such testimony as has been presented by the experts in this case, and in the light of all the circumstances of the case and the testimony of the physician himself, whether or not there was good or bad faith.

The statement just made is broader than necessary because the presumption of innocence avails the defendant. And if the evidence is such as to raise in the mind of the trier of facts a reasonable doubt as to whether the practice followed by the physician was proper or improper, the judge, as the trier of facts, must, as would a jury under his instructions, under the doctrine of reasonable doubt, resolve that doubt in favor of good faith and acquit the defendant.

Now, if we analyze the cases treated by the defendant which have been brought before the Court, we divide them into two classes: Three cases which may be called "clinic cases" and the fourth a "non-clinic" case.

There is no need to go into a detailed discussion of the events which lead, first to the establishment and then the abandonment of the narcotic clinic in the City of Los Angeles. I am satisfied that everybody acted in good faith. These facts are undisputed: The authorities of the City of Los Angeles, at the behest of the Los Angeles Medical Society, confronted, as is every large city, with the narcotic problem—and particularly every large city which is within easy access of countries like Mexico, which are a great source of supply for drugs—were also confronted with the problems of a large number of addicts whose wants were being supplied by peddlers for remuneration. They approached the problem not dogmatically, but scientifically. And on the advice of medical authorities the health authorities of the City of Los Angeles established a clinic wherein those known addicts whose addiction had become pathological could, after being examined by physicians and certified, receive a quantity of the drug. It is also undisputed that thereafter (on May 11, 1934) a meeting was called and attended by representatives of various departments of the State, local and Federal governments interested in the matter. The meeting was called in the office of the Health Officer of the City of Los Angeles, Dr. George Parrish—the same officer who had continued the clinic which his predecessor, Doctor Powers, had established previously at the behest of the physicians. He testified that one physician was designated by his office to prescribe. Afterwards the clinic was taken over by the County General Hospital. He asked the defendant to come to the meeting because of the experience the defendant has had with the disease as a Federal physician appointed by the Government to look after the health of the Federal prisoners incarcerated in various jails. There is some disagreement as to what took place at the meeting. I think too much attention has been paid to the fact that Chief of Police James E. Davis of Los Angeles stated that under no circumstances could prescriptions continue without a reëxamination, and to the fact that Mr. Harry E. Smith, the United States Narcotic Agent for this District, made a similar statement. Ultimately, neither Chief Davis nor the Federal authorities can give an ultimatum to a physician as to the manner or treatment by him—as to a course of professional conduct—the violation of which would constitute a violation of the law.

The fact remains, however, that Doctor Parrish, the Health Officer of the City of Los Angeles, had asked Doctor Anthony to take over the prescribing for these addicts who had been certified by the clinic. Doctor Parrish testified that Doctor Anthony called him up, as the patients would be sent to him, told him that the police were giving him trouble, and that the Federal Narcotic Agents were creating difficulties, that he was "having too much grief and it was costing him too much in his medical practice" to continue this Good Samaritan act which he was doing at the request of his colleague. On one occasion he asked to be allowed to resign the position. The fact is also undisputed that during the seven weeks Doctor Anthony was actually paid by the City of Los Angeles the sum of $135 for taking over this clinic.

Now, we come to the men who were in the clinic—the three men—and we find, without going into any great detail, that each of them had been previously examined. Each of them had been certified to by the public physicians as suffering from chronic addiction which required treatment. We find in addition to that, and despite the fact that the number of cases made it impossible to examine them all at one time, the defendant made examinations of each of them.

I think the testimony of the addicts themselves is sufficient to show the defendant's good faith even if no one else had so testified. In fact, I am inclined to think that without the expert testimony of Doctor Orbison and Doctor Thienes, as to these three cases, at least, the defendant was entitled to a verdict of acquittal at the conclusion of the Government's testimony. But the fact that there was expert testimony to the effect that it was not proper medical practice, and there was no statement by the defendant except such as could be implied from the facts surrounding the prescriptions, that he acted in good faith, led me to deny the motion upon the ground that a prima facie case had been shown. Although I am inclined to the view that as to these three cases, even excluding the defendant's testimony and the testimony of the experts to the contrary, the Court could have concluded from the fact that the defendant was asked to take over the work and from the fact that he made such examination as he could, that he acted in good faith under the circumstances.

Let us look at the testimony of those three persons. Here is Jensen. He testified that he had been an addict for twelve years and had suffered from phlebitis, from backaches and had gone to Doctor Anthony. He described his pains to him and told him the nature of them and the names of the doctors to whom he had gone and who had given him narcotics. The defendant took both a urine test and a blood test. At first he didn't give him any prescription. The next time he not only prescribed the drug but he put some medicine on his back. He gave him morphin after the laboratory tests of the urinalysis and the blood analysis came back. He advised confinement, claiming that his addiction could be cured if he could stay in bed and have himself examined and treated. He told him that Dr. Edward Huntington Williams had examined him in 1935 and had said that he had syphilis and that a Doctor Smith had prescribed narcotics.

We come to Peter Mayers. He had been an addict for thirty-five years, and he claims to have a broken back. There is no dispute that he has a broken back and that some vertebrae had been removed. He had been getting from four to seven grains a day and was sent from the General Hospital. The defendant gave him a thorough examination; he examined him with a stethoscope and saw he was wearing a brace; he wanted him to come back for further x-rays and he gave him medicine for asthma. He testified that he had been examined by six physicians at the clinic before he was certified as an addict.

William Avery had been an addict for twenty-seven years. He had been examined at the clinic and headed the list of the names of the patients of the clinic that was given to the defendant. He made such examinations as he could make, but could not make a more thorough examination.

As to all these patients we have the statement of the defendant that, in his opinion, the prescription was proper under the circumstances. There is the testimony of Doctor Orbison and Doctor Thienes that, in their opinion, the amount prescribed was not necessary. Opposing this we have other testimony of Dr. George Parrish, as well as the testimony of Dr. Ross Moore, Dr. William Duffield, that it was a proper medical practice. I think Doctor Duffield testified to the fact that it was his opinion that ambulatory treatments were not correct. But these physicians and others testified that where drug addiction had become pathological the withdrawal of narcotics was not justifiable.

When we come to the Joseph Tint case we find that he was a "private," (i.e., a non-clinic) patient. Tint, according to his own testimony, stated that he had taken the drug for twenty-three years and that he suffered from arthritis. He had not been certified by the clinic, but had been examined by Doctors Carey and Williams. First, defendant declined to prescribe for him. Later he examined him and prescribed drugs and advised hospitalization. In all these cases the treatment was interrupted by the arrest of the addicts and later by the discontinuance of the treatment by the defendant.

I think that the evidence clearly shows not the case of a physician who looks for gain—in violation of that high ethical standard which should govern physicians—and, for profit, seeks to capitalize his knowledge by preying upon unfortunate addicts. I have nothing but contempt for that kind of physician. We here have a situation, as I see it, of a city medical department establishing a narcotic clinic and finding that it resulted in evil; and that the law enforcement authorities objected to it. closing it down and then this physician being asked—by the medical authorities to take over the work. There is no disputing the fact that Doctor Parrish asked the defendant to take over the work of the clinic and that he was paid by the city. It seems to me, Gentlemen, that under these circumstances to find that a physician who did so violated a law, merely because from the viewpoint of the law enforcement authorities, he was not so careful as he might have been with reëxaminations, and in issuing drugs to persons who, in their opinion, should be hospitalized—would do violence to the very spirit of the law; and to the very spirit of fairness which we must always read into the interpretation of any penal statute of the United States, as expressing that idea which is so prominent in the American people, the desire for fair play. It would mean that we might ask a person to do a thing and then say, "I am sorry, but you have committed an offense." That does not mean, of course, that a person might not be guilty of an offense although he followed the advice of the City medical authorities in such matters. I think he could be. It is not the law that a medical officer can give an absolution of criminal offenses any more than it is a law that the enforcement officers can, by placing their own interpretations on the law, create an offense which does not exist. But a physician is not punishable under this law, unless, under all the evidence in the case, he is shown to be guilty of bad faith, and has failed to follow accepted medical practice.

Can we say that a physician, who, at the behest of State authorities or City authorities took over the treatment of narcotic addicts, who supplemented the clinical record which he knew existed by his own examination, and administered drugs for a period of a few weeks, while he was treating each of these persons, is guilty of bad faith, and violates proper medical practices? The answer must be in the negative. Any other interpretation would make us dogmatic arbiters of the medical profession and would do harm to the anti-narcotic cause.

The conclusion I have expressed is made more imperative by the fact that we have expert medical testimony to the effect that the treatment which the defendant administered was proper under the circumstances and conformed, as one physician, Dr. Ross Moore, said, even to the high professional ideal of the Hippocrates oath. This oath makes it the duty of a physician to relieve suffering and to use his own judgment in so doing. He should not be punished when living up to it.

This applies to the three "clinic" cases. As to the "non-clinic" case—the case of Tint—I believe the evidence shows that the prescription was warranted. He went to the defendant because he understood from those who had attended the city clinic that it had been taken over by him. But whether we tie him to the clinic or not, the fact remains that he was and had been an addict over a long period of time; that he had been given narcotic prescriptions by others; that he was first refused by the defendant and that hospitalization was advised. The fact that Tint is cured now after long incarceration in a penitentiary especially equipped to deal with narcotism, should not be considered in determining whether the treatment was proper at the time. As to Mayers, Jensen and Avery, the evidence shows that the drug was withdrawn from them while they were in jail, by a physician who had no previous experience along these lines. But they have since returned to the habit, except as for such time as it was taken away from them during incarceration. Ultimately, however, even if the result was not what was expected, the question to determine is not whether *the judgment used was good* or bad, but whether the defendant *believed*, in all these cases, that the treatment he administered was proper by ordinary medical standards. The evidence supports the conclusion that he did so believe. Here, the evidence—exclusive of the defendant's own defense of his actions—warrants the conclusion that the practice was proper.

For the reasons indicated I find the defendant not guilty of any of the offenses with which he is charged in the four indictments. Exception to the Government.

Dated this 23rd day of June, 1936.

LEON R. YANKWICH,
U. S. District Judge.

THE LURE OF MEDICAL HISTORY†

MEDICAL CONDITIONS, PRACTICES, AND FOUNDATIONS IN THE CONTINENTAL COLONIES*

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PART I

INTRODUCTION.—According to Oliver Wendell Holmes, "The state of medicine is an index of the civilization of an age and country—one of the best, perhaps, by which it can be judged." This opinion is almost directly applicable to the situation existing in the early American colonies. The struggle of medicine, just like that of other vital parts of the American colonies, had to overcome superstitions, a partnership with priesthood, and false philosophies. All these obstacles had to be conquered, dissolved, or eliminated before the means which nature and art have put in the hands of physicians could be brought to practical use. Nothing brings to light the superstition of an age more than the treatment and interpretation of disease of those early times. With these thoughts in mind, it is the object of this paper to discuss the prevailing, and sometimes appalling, conditions and practices among the small group of settlements known as the Continental Colonies of America, and the resultant developments for medicine.

The period to be discussed covers a span of some 180 years in this country, that is, between the years 1620 and 1800. It was the period when in Europe great universities were being founded and important medical discoveries made. The University of Edinburgh had been chartered, and it was here that the leading colonial physicians were trained. Human dissection was being revived, the University of Edinburgh having built its first anatomical theater in 1697. Descartes had published the first treatise on physiology. The Reverend Stephen Hales had, for the first time, measured the blood pressure in a horse in 1726. He also produced dropsy by injecting water into the veins. The first clinics for poor patients were organized in Prague in 1745. Lavoisier had discovered oxygen in 1775, and shown its importance in breathing. Among the most important of all medical developments was the discovery of the circulation of the blood by that immortal physician, William Harvey, in 1628. Europe at that time was no doubt a long jump ahead of the American colonists, who admittedly labored under great handicaps and disadvantages. However, it will be presently shown that, despite all obstacles, they were not found wanting, and that they and theirs laid the foundations of lasting and permanent benefits to medicine and to humanity throughout the world. They caught up with and passed the Europeans.

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†A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

* Second award in an essay contest of The Colonial Dames, December 1, 1935.

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IN THE DAYS OF THE PILGRIM FATHERS

Let us turn to the Pilgrim Fathers, and consider first the state of their early settlement. It seems that these weary travelers were beseiged by many diseases, some of a fatal nature. Many medical historians are inclined to believe that the climate disagreed with these travel-worn souls. In all probability this was true, since the older physicians wrote considerably about the prevalence of the common cold, pleurisy, and pneumonia, which, no doubt, were caused by the extremes of climate in the eastern states. The colonists were plagued with one disease in particular, namely, scurvy. They had neglected to bring along the fruits and products which contain the necessary vitamins for the prevention of scurvy. Consequently, many of them died before reaching land, and some died even after they had landed. Those who landed at Cape Cod, after the long journey from England, were a forlorn lot of gaunt and hungry creatures longing for fresh food. They found "great mussels, and very fat and full of sea pearl" (Packard). Both passengers and sailors indulged liberally in this dangerous delicacy, and soon these way-worn travelers were treated to a gastric remembrance of the "heaving billows," now gratefully behind them. The food was not only unpalatable, but it made them generally ill. Nevertheless, the Pilgrim Fathers had to subsist on this food, with the result that the scurvy increased alarmingly. Had it not been for the discovery of some wild berries and grapes they might have all perished. As it was, many died: in December six died; in January, eight; in February, seventeen; and in March, thirteen. With the coming of spring the mortality rapidly diminished. The little community, depleted of able-bodied men, and with many of the living crippled and sick, nevertheless took heart and started building. They had to commence from the ground up; almost everything seemed lacking, even good health, without which there can be nothing.

Undoubtedly one of the most pressing needs of these early settlers was medical attention and sanitation. In Savage's "Genealogical Dictionary of First Settlers Before 1692 and Their Descendants," there are scattered throughout the names of 134 practitioners of the healing art. Of these, twelve professed, but probably many more practiced. surgery, since there were also barber-surgeons. It is interesting to note that the practice of medicine, or "physic," was only a sideline, or avocation, with these individuals. Their main business or work was something else. For instance, one man was a schoolmaster and poet; one kept a tavern and practiced "physic." One was a butcher, but called himself a "surgeon," and, doubtless, the connection with his real profession was not far remote. One female practitioner "employed by her own sex—Ann Moore—was one of the more noted midwives" (Mumford). It was a motley lot of talent, much of it crude and amateurish, and a danger to the little community.

MEDICAL PRACTICES AND PRACTITIONERS DURING THE COLONIAL PERIOD

A student of history might inquire into the doctrines, theories, or practices of healing which these colonists brought with them. There were two principal schools of thought in the Old World at this time, and to one of these the colonists did not subscribe. This one was the old philosophy of Galen based on the theory that the body was made up of four main elements, namely, fire, air, water, and earth, which possessed the qualities hot, dry, moist, and cold. In order to be in perfect health, a man had to keep these qualities in equal proportion to each other. Diseases, which had as their cause an excess of heat, were quieted by cooling remedies; those originating with an excess of cold, by heating remedies, and so on. The leading principle of the Galenists was this: "Disease is to be treated by anything that is proved to cure it" (Holmes). The cures employed by the Galenists consisted chiefly of diets and vegetable remedies, with the use of a lancet or other devices of similar nature. If the Galenists lived today, they would probably be called "herb doctors." These practices were eventually discredited, due to the nauseating concoctions, and the absurdly complicated mixtures, which sometimes were worse than the disease.

The other, or chemical, school of healing was a much simpler idea, and depended chiefly on the use of mineral remedies, such as sulphur, mercury, antimony, and arsenic, with a secret use of opium at times. This school did much to replace the old, repulsive herbal concoctions with more agreeable and effective remedies. It was this school that the New England fathers followed. The prescriptions of their physicians contained a few potent drugs. In one of the manuscripts sent to Governor Winthrop, in 1643, by a certain Doctor Stafford, the following prescription was included: " . . . for yellow Jaundise—Boyle a quart of sweet milke, dissolve therein as much bag-salt, or fine Salpeter, as shall make it brackish in taste; and putting Saffron in a fine linen clout, rubb it into ye Milke, untill ye Milke be very yellow; and give it ye patient to drinke" (Packard). This example is cited in order to show that the remedies prescribed for the colonists consisted mostly of simple chemical and household ingredients.

The most common practice, however, among the colonial physicians was blood-letting. For every disease or injury the physician would "let blood," sometimes to a point of near exhaustion. There is a written account of this practice by

Doctor Fuller, who was one of the earlier colonists and also one of the best physicians, to Governor William Bradford, dated June, 1630, in which he indicates its scope during one of the many malarial epidemics. He states, "I have been to Dorchester, and let some twenty of these people blood." For once this blood-letting might have helped the patient, although weak and exhausted, because malaria is a disease of the blood, and by removing blood the patient was freed of the microörganisms causing the illness. Nevertheless, a great many of the colonists succumbed to this disease, and even the physicians themselves were not spared.

It is interesting to note that one of these colonial physicians was more successful in teaching his colleagues and influencing public opinion than he was in the practice of his art. He was Dr. Giles Firmin, who practiced "physic" (medicine) in the colonies for a time, but it seems that business was none too good. For, in a letter to Governor Winthrop, he writes that he will study divinity because "physick is but a meene helpe." Be that as it may, Doctor Firmin's lectures and dissections in anatomy were the first real scientific medical teaching in the New World. While many of the colonists regarded this as nonpuritanical practice, the New Englanders were broad-minded enough to allow the teaching of anatomy. The Puritans were, nevertheless, severe in dealing with quackery. For, in 1631, one Nicholas Knopp was fined fifty pounds and sentenced to be whipped for "taking upon him to cure the scurvy by a water of noe worth or value, which he sold at a very deare rate." If such a rule were enforced today, there would be quite a number of sore backs and not a few of their owners with empty purses. Such unscrupulous men as these, the decent colonial doctors were forced to combat continuously. As a result there were formed organizations of medical practitioners which eventually developed into the medical societies of Philadelphia, Massachusetts, New York, and Maryland. An interesting purpose of the constitution of one of these organizations was that the community might be benefited by such a union of doctors. Accordingly, a meeting was held in 1765 by the doctors of the Philadelphia Medical Society to "consider and report matters relative to physic." The society considered several papers upon subjects which were of fundamental importance to medical practice at that time. Some of these were: "Dissertation on Causes, Nature and Treatment of Apoplexy," "On Consumption," "An Essay on Virtues and Uses of Several Substances in Medicine, that are The Native Growth in America" (Norris). The last paper dealt with remedies prescribed for such plagues as smallpox, insanity, broken bones, fevers, and king's evil. The remedies were such humble and innocuous herbs and vegetables as St. John's wort, maiden hair, parsley, and elder. All these were considered curatives, and most of the physicians prescribed them religiously. However, these were not the only remedies in use; there were also mechanical devices. For instance, as early as 1634, a Dr. John Clark mentions the use of the trephine as a surgical instrument for cutting round pieces of bone out of broken skulls. While trephining is a very old operation, and is said to have been practiced by some Indians, it seems that colonial physicians were not overlooking anything which added to their skill, although they must have made this operation without anesthesia, which came later.

From what has been said, the New England physician of Colonial times may be regarded as a cross between an herbalist, a pharmacist, and a surgeon. This gives a fair idea of a combination of superstition and crude empiricism inflicted on a patient who fell into the hands of an intelligent and somewhat educated physician of the middle seventeenth century. Governor Winthrop of New England himself was a fair example of a seventeenth century physician, although not a trained medical man. His great remedy was nitre, which he ordered in doses of 20 to 30 grains for adults, and of 3 grains for infants. Measles, colic, sciatica, headache, and other ailments were all treated with nitre, and many patients were undoubtedly improved. For nitre was a pretty safe medicine in moderate doses for patients naturally recovering anyway, and one not likely to keep the good governor awake at nights. He also gave sulphur and antimony, along with the very harmless "powder of coral," less frequently a dose of powdered amber, and sometimes, as a last resort, a dose of cowhage, which caused a fearful upset of the stomach and intestines.

(To be continued)

Conversational Gems of Dr. J. P. Widney*

Founder of the Los Angeles County Medical Association: At Age of Ninety-Five Still Active in Literary and Church Work

Ambition without ability is a very doubtful mental asset.

For the young man, the diploma simply opens the door. It is the man that has to go in.

No man ever yet expressed in words exactly what was in his mind. Words are clumsier than thoughts.

Controversy kills conversation.

When you have reached the top of the hill, there is nothing higher.

Make everybody love you. How shall I do this? By loving everybody. Love begets love.

Perhaps the mental unrest in the world is bearing fruit in the climate.

One cannot buy youth in a drug store.

The poor lives are not those who have not money, but those who do no work.

Cultivate the habit of saying pleasant things. It smooths the pathway of life.

Nations are made—not born.

Real prosperity will return when people quit working for a fortune and begin working for a living.

The desert is the lungs and the life of the world.

The only way to check debt is to destroy credit.

Socialism—we ate our cake—you saved yours. Now, divide your cake with us.

Wealth is a heavy handicap to a young man.

Adjectives are the filigree work of literature.

There are people who are never happy until they have burnt their fingers.

In every business partnership some one man has to be the firm.

Forget yourself, but be yourself. This is where individuality comes in.

(To be continued)

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* Compiled by Rebecca Davis Macartney.

Previous excerpts from the Macartney Compilation were printed in the July issue (page 61).

CLINICAL NOTES AND CASE REPORTS

RELAPSING FEVER*

By R. C. Atkinson, M. D.
Colfax

REPORT OF CASE

“Dr. R. C. Atkinson then delivered an address to the Placer County Medical Society, taking up the subject of relapsing fever, and reported a case of this disease which occurred recently, in his practice, in a man of fifty-eight years who had been visiting in the Lake Tahoe area and apparently had received the infection while there. In his paper, Dr. Atkinson discussed the epidemiology of the disease and its importance to physicians in California because of the large number of people using the parks and national forests in which the disease is endemic among the squirrels and chipmunks. The first cases reported in California were announced in 1922, by Dr. LeRoy Briggs, of San Francisco, and there is an excellent article on this subject by him in California and Western Medicine, May, 1935. Since Dr. Briggs published a report of these two cases from Polaris on Lake Tahoe, eighty-six others up to January 1, 1935, had been reported to the State Department of Public Health. A large proportion of these cases occurred from two endemic foci; one in the region of Big Bear Lake in San Bernardino County, and one in the Lake Tahoe region in eastern Placer and El Dorado counties. The disease is most common in the months of June, July and August. Males are affected twice as frequently as females, due probably to their greater use of the out-of-doors. The incubation period averages seven days, and is usually under twelve days. The onset is abrupt, with the fever reaching its height within twenty-four hours and continuing for from three to seven days. The patient complains of chills, malaise, generalized aches and pains, sweats and headaches. Aside from a moderate enlargement of the liver and of jaundice, in about one-fifth of the cases, there are no characteristic physical findings. With the exception of a slight anemia, the blood count is usually normal, but may show a polymorphonuclear leucocytosis at the height of the paroxysm. Blood smears taken at the time of paroxysm, either fresh or stained with Wright's stain, will show the organism, which is a treponema. Smears taken during the afebrile period are less apt to show the organisms, but citrated blood in normal saline taken from the patient is infectious to mice, and the organisms may be recovered after a few days, if an injection is made into the peritoneal cavity of the mouse, even though the blood is taken several days after the paroxysm. The febrile period terminates after three to seven days, and is followed by an afebrile period of three to seven days, during which time the patient feels well and may be up and around. This, in untreated cases, is followed by recurrence of the fever and symptoms, lasting, on an average, for seven days—the attacks tending to become less severe as time goes on. A single injection of .3 grams to .45 grams of neoarsphenamin intravenously terminates the disease at once in 80 per cent of the cases. Subsequent injections of one or two doses of .3 to .45 grams are usually advised. Dr. Atkinson demonstrated the organisms of relapsing fever under the microscope with smears taken from his patient.

“Because of the increasing prevalence of relapsing fever in the Lake Tahoe region, Dr. Atkinson's paper was very timely.”

Box 327, Colfax.

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* This report of case is taken from the report of the Placer County Medical Society, printed in the current issue. See page 201.

HEPATIC CIRRHOSIS WITH ENCAPSULATED PERITONITIS*

REPORT OF CASE

By C. A. Noble, Jr., M.D.
I. H. Perry, M.D.
and
H. H. Marquis, M.D.
San Francisco

Purulent peritonitis as a complication of cirrhosis of the liver is an uncommon occurrence. From a review of the literature, we believe that such a case is of sufficient infrequence and general interest to warrant a brief report.

REPORT OF CASE

The patient was a mulatto male, aged 64, whose illness began about six months before entry, with some increase in the size of his abdomen, following a short period of vague digestive disturbances. He was an habitual user of alcohol for a considerable number of years. The remainder of his history was essentially negative.

On physical examination, his abdomen was somewhat distended with fluid. A non-tender, firm liver-edge was palpable above five centimeters below the costal margin. The spleen was not felt. There was no evidence of jaundice. There were distended veins over the lower chest and abdomen, indicating increased collateral circulation. He had an unmistakable hepatic facies. Otherwise, the physical examination and the laboratory studies, including the Wassermann reaction, were essentially negative.

A diagnosis of portal cirrhosis was made; and palliative treatment was instituted, with the use of diuretics.

Three and one-half months following examination, paracentesis was first performed with the removal of 2,400 cubic centimeters of chyliform fluid, containing eleven lymphocytes per cubic millimeter. After a five weeks' interval, the patient was again tapped and 8,600 cubic centimeters of straw-colored, slightly cloudy but not chyliform, fluid were withdrawn, containing 628 leukocytes per cubic millimeter, 58 per cent of which were polymorphonuclear cells. At a third paracentesis, two weeks later, 6,000 cubic centimeters of fluid, containing 6,040 cells with 89 per cent polymorphonuclear leukocytes, were obtained. Paracentesis was attempted three weeks following this, but in spite of a markedly distended abdomen, no fluid was obtained. Two weeks after this, another puncture yielded 8,000 cubic centimeters of thick, foul-smelling, purulent material, a smear of which showed mostly polymorphonuclear leukocytes and bacteria. By culture, organisms of the colon group were grown, including B. coli, B. paracoli, and enterococcus alpha. Ten days later, 1,600 cubic centimeters of a similar fluid were withdrawn. During the five days following this paracentesis the patient's condition became progressively worse, and on the fifth day exitus occurred.

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* From the Departments of Medicine and Pathology, University of California Medical School, in their services at the San Francisco City and County Hospital and the Laguna Honda Home.

During the entire course of his illness the patient had only slight fever. His pulse rate was normal, and his appearance gave no evidence of the severity of his condition as indicated by the aspirated fluid. His abdomen was never tender nor rigid; and at no time did he complain of nausea, vomiting, or diarrhea. The leukocytes in the blood stream at the time of the first tap, in which purulent material was obtained, numbered 13,600, with 64 per cent polymorphonuclear leukocytes; at the time of his last tap, ten days later, the number of leukocytes had risen to 60,000, with 85 per cent polymorphonuclear cells.

At postmortem examination, a large, thick-walled abscess was found; this contained about two gallons of greenish-grey, foul-smelling pus.† The abscess extended from the upper part of the pelvis, where it was adherent to the bladder, nearly up to the umbilicus in the midline, and about 10 centimeters higher in each flank. The anterior boundary of the abscess was the parietal peritoneum of the anterior abdominal wall; posteriorly it was enclosed by matted and distorted intestines. In the midline, near the upper part of the abscess, its anterior and posterior walls were densely adherent at one point. Leading anteriorly from this point was a closed fibrous and necrotic tract which extended to the skin of the linea alba. The size and position of the tract suggested that it might represent the site of an old paracentesis. Posterior to these adhesions of the abscess walls, the intestines were more densely attached to the abscess than elsewhere. The abscess wall was about one-half centimeter thick. Its inner surface was necrotic, and flecked with fibrinopurulent plaques (Fig. 1). The thickness and density of the wall indicated a long-standing process. The intestines, which were densely adherent over the posterior surface of the cavity of the abscess and to each other, were pushed backward and upward. There were no fistulous tracts between the abscess and the intestines. Between adherent coils of the intestines were small pockets of clear, amber fluid, and one small cavity containing chyliform fluid. No cysts were found in the mesentery nor any other lesions except the adhesions described above.

The appendix could not be located. A ruptured appendix did not, however, seem a probable source of the abdominal abscess, as coils of intestine lay between the cecum and the abscess cavity.

The gall-bladder, although involved in adhesions, was essentially normal.

The liver, both grossly and microscopically, showed the characteristic picture of portal cirrhosis, with fibrous tissue radiating from the portal spaces and replacing the normal parenchyma. The pancreas was normal. There was no indication that it bore any relation to the abscess.

The lungs showed the presence of a terminal bronchopneumonia, which appeared to be the immediate cause of death.

COMMENT

Peritonitis in patients with cirrhosis, as well as in those without this diease, might arise by either endogenous or exogenous routes. Endogenous peritonitis may result from: (1) direct extension from infection within adjacent viscera, either by their rupture or by penetration of their walls by the offending organisms; (2) infection transferred by lymphogenous paths; and (3) infection transferred by hematogenous paths. Exogenous peritonitis may result from: (1) direct infection of the peritoneal surface, such as may occur at operation; (2) trauma, as may occur with bullet wounds; or (3) paracentesis. That the last mentioned may be an etiologic factor in peritonitis, is shown by Pflaum,[1] who specified paracentesis as the cause of 7 out of 741 consecutive deaths from peritonitis.

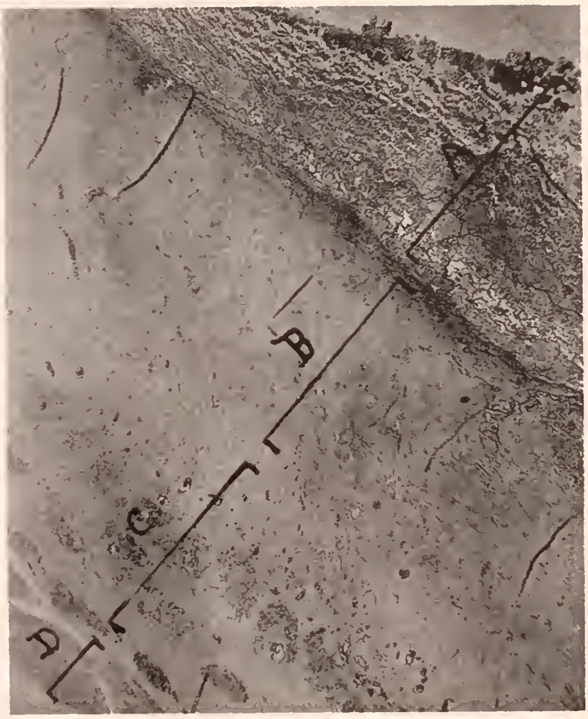

Fig. 1.—Wall of abscess. Magnification, seventy-five times. *A*, interior of abscess, fibrinopurulent exudate; *B*, fibrous wall; *C*, granulation tissue; *D*, muscularis of intestine.

That peritonitis should very frequently occur in patients with cirrhosis would seem reasonable, since this disease damages extensively an abdominal organ connected with the bodily defense mechanisms. A wide variety of pathogenic organisms are found. Experimentally, Fiessinger [2] and his coworkers have found that in animals with phosphorus or chloroform poisoning, resistance to pneumococcus and streptococcus infections was less than in normal controls. Benians,[3] working with rabbits, found that animals injected intraperitoneally with gum would succumb to peritonitis following intravenous or intraperitoneal dosage of B. coli, which normal control animals could withstand.

The rarity of occurrence of peritonitis in patients with cirrhosis of the liver is still subject to difference of opinion. Soubourin,[4] as early as 1881, noted tuberculous peritonitis as a frequent complication of hepatic cirrhosis. Lemierre and Delbriel,[5] on the other hand, deny that tuberculous peritonitis is common in patients with cirrhosis, using as an argument the fact that rapidly progressive tuberculosis in alcoholics usually spares the peritoneum. Dumitresco and Olinesco [6] believe that secondary infection of ascitic fluid is a rare complication. Rolleston[7] states that all patients whose hepatic disease outlasts two paracenteses, have their ascites on the basis of low-grade chronic peritonitis. Hawkins and Fletcher,[8] Scrimger,[9] and Rendu,[10] all feel that terminal peritonitis is a common accompaniment of cirrhosis of the liver, as it is, likewise, of cardiac insufficiency and nephritis.

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† A guinea-pig inoculated intraperitoneally with this material did not develop tuberculosis.

[1] Pflaum, C. C.: Jour. Miss. State Med. Assn., 30:72, 1933.

[2] Fiessinger, N., and Brodin, P.: Annales de Médicine, 11:474, 1922.

[3] Benians, T. H. C.: British J. Exp. Path., 5:123, 1924.

[4] Soubourin, cited by Fiessinger, N., and Brodin, P.: Annales de Médicine, 11:474, 1922.

[5] Lemierre, A., and Delbriel, J.: Bull. et Mém. de la Soc. Méd. des Hôp. de Paris, 50:300, 1926.

[6] Dumitresco-Mante, and Olinesco, R.: Ibid, 50:214, 1926.

Due to the absence from the literature of carefully summarized data, including differential and total blood counts, report of cultures and records of subsequent autopsy findings, the question of the frequency of association of peritonitis with hepatic cirrhosis must remain unsettled. In a series of 264 cases of cirrhosis of the liver at the University of California Hospital, only twelve patients by paracentesis showed fluid with a differential count of ten or more per cent polymorphonuclear leukocytes. In only one patient was the white count of this fluid as high as 4,000 per cubic millimeter. This was obviously not such purulent material as was encountered in the patient presented in this paper.

Lemierre and Delbriel[5] report two patients with cirrhosis, in both of whom abdominal paracentesis was followed by a sharp rise in temperature, a rise in the ascitic white blood cell count, and a positive ascitic culture. One of these patients lived for at least two months with a normal ascitic fluid shown by subsequent punctures. Finally he developed symptoms and died of a colon bacillus-peritonitis three weeks after the last tap. These authors feel that many patients who have never been tapped develop peritonitis; and that in many cases the offending organism is one such as the pneumococcus, which is neither a contaminant nor a usual inhabitant of the colon. The fact that purulent peritonitis in cirrhotics is rarely due to puncture, should be of some solace to physicians in whose patients this complication develops.

Pitsoris[11] reports three patients with cirrhosis in the early stages, without ascites, in whom acute abdominal symptoms suddenly developed, with death from purulent peritonitis. In one of these patients, mesenteric thrombosis may have been the cause; in another, otitis media with septicemia; but in the third no source for an enterococcus peritonitis was found.

In the patient presented in this paper, the source of the peritonitis might be questioned. Autopsy showed no rupture of an adjacent viscus such as the gall-bladder, nor interference with the circulation of the bowel. The appendix was not found, nor had it been previously removed. If the infection resulted from an appendicitis, one would have expected more pericecal adhesions, and the bulk of the infection would have been on the right; also, normal loops of intestine separated the abscess from the cecum. Moreover, the organisms found on culture were frequent inhabitants of the intestinal tract; and the sinus from the abdominal wall appeared to lead from one of the paracentesis wounds to a loop of bowel. Puncture of an unattached loop of bowel is difficult. Perhaps a transient previous peritonitis had occurred, as has been reported by Lemierre and Delbriel.[5] It is our assumption that in some manner the bowel had become partly adherent to the anterior peritoneal wall, and that it had been penetrated during paracentesis. In this way a peritonitis resulted, which was walled off by previous adhesions or by natural resistance. Gradually this increased in size to form the large "pus pocket" found at postmortem examination.

In this patient the feature of particular interest was the enormous thickness of the pyogenic membrane, suggesting an infection of at least several months' duration. The finding of three cavities within the peritoneum, containing separate fluids so that each could be tapped independently of the others—one yielding pus; the second, normal ascitic fluid; and the third, chylous fluid—must be an almost unique experience.

Rendu[10] calls attention to the absence of pain and to low fever in peritonitis associated with cirrhosis, and suggests the symptoms of diarrhea, nausea, vomiting, and hiccoughs, as aids to diagnosis. The striking lack of toxicity in our patient is to be emphasized, and the presence of little fever, a slow pulse and a low white blood cell count, although from 6 to 8 liters of pure pus must have been contained in the peritoneal cavity for days and probably even for weeks before death.

SUMMARY

1. The case of a 64-year-old mulatto male, with cirrhosis of the liver and symptomless encapsulated peritoneal abscess yielding eight quarts of pus, is herewith presented.
2. The literature on the association of peritonitis and cirrhosis is briefly summarized.
3. Such a survey of the literature reveals the lack of data correlating, by repeated paracenteses, cultural and cellular studies.
4. It is suggested that, in view of the lack of symptoms in cases reported, peritonitis of a low-grade type may be a frequent concomitant to cirrhosis of the liver; but that such a picture as the one presented must be very rare.

University of California Medical School.

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[7] Rolleston, Sir Humphrey: Oxford Medicine, Oxford University Press, Vol. 3, Part I, p. 378, 1928.

[8] Hawkins, H. H., and Fletcher, H. M.: Albutt and Rolleston System of Medicine, Macmillan, Vol. 4, Part I, p. 180, 1910.

[9] Scrimger, F. A. C.: Nelson Looseleaf Medicine, Thos. Nelson and Sons, 5:565, 1920.

[10] Rendu, cited by Dumitresco-Mante and Olinesco, R.: (See Ref. 5.)

[11] Pitsoris, G.: Deutsch Med. Wchnschr.: 58:296, 1932.

MERALGIA PARESTHETICA

By Maxwell Thebaut, M.D.
Oakland

MERALGIA paresthetica is a well defined, but infrequently recognized affection of the lateral femoral cutaneous nerve. It was first described independently by Roth[1] and Bernhardt[2] in 1895. It is characterized by paresthesia of the outer side of the thigh, is usually unilateral, but may be bilateral. The disturbance of sensation may extend from mild numbness to intractable pain. There may also be tingling, itching, and burning.

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[1] Roth: Meralgia Paresthetica, Berlin, S. Karger, 1895. Obtained from reference 4.

[2] Bernhardt: Ueber isoliert Gibiete des Nervus cutaneus femoris externus vorkommende paraesthesien, Neurol. Centralbl., p. 242, 1895. Obtained from reference 4

Some writers regard the disease as comparatively rare, but it is the author's opinion that the wide range of severity seen in different cases is responsible for this. Patients are frequently indifferent to symptoms that do not cause them actual distress, and it is probable that in some of the milder cases they do not consult a physician. Moreover, the entity may not always be in the mind of the examiner.

Definition. — Stedman defines meralgia paresthetica as "tingling, formication, itching, and other forms of paresthesia in the outer side of the lower part of the thigh in the area of distribution of the external cutaneous branch of the femoral nerve; there may be pain, but the skin is usually hypesthetic to touch."

Etiology.—Many theories have been advanced to account for this symptom complex. Rosenheck[3] believes osteo-arthritic changes in the spinal vertebrae are responsible. Stookey[4] believes it arises as a result of mechanical causes due to angulation of the nerve as it emerges from the pelvis; that a low-grade trauma is set up due to the nerve not being long enough to avoid excessive angulation and tension at this point. (For a more detailed discussion of the etiologic factors offered, the reader is referred to the article by Bergsma.[5])

Pathology. — To my knowledge no gross or histologic changes have been demonstrated.

Age and Sex.—Most writers are agreed that the disease occurs most often in the middle decades, and that men are afflicted somewhat more frequently than women.

Symptoms.—The symptoms are confined to the area on the outer side of the thigh that is supplied by the lateral femoral cutaneous nerve. They consist chiefly in numbness, pain, burning, pricking or itching of the skin. On examination, anesthesia or hyperesthesia may be noted in some patients. There may be a lessened appreciation of temperature changes. The pain may be worse on standing and may be severe. At times the presence of clothing will be uncomfortable. In contrast to these patients with pain and burning are those to whom I would call attention, who do not find themselves particularly distressed. These may have only a sensation of numbness and occasionally a slight tingling in the affected area, and unless some unrelated circumstance leads them to their physician they probably would not seek his advice. One of the cases reported herewith comes in this group.

Treatment.—In severe cases specific measures have included sectioning of the lateral femoral cutaneous nerve as it emerges from the pelvis, with avulsion of the distal portion; or sectioning the nerve in the same location, but leaving the distal portion *in situ.*

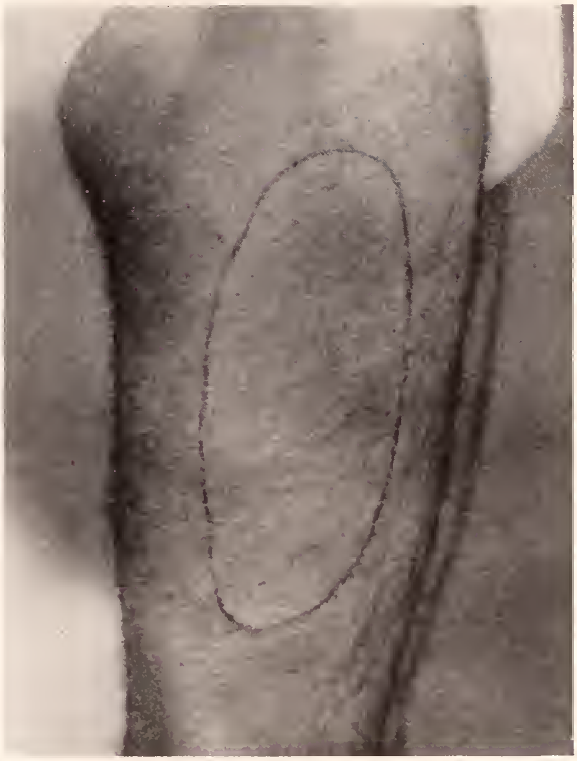

Fig. 1.—Area of involvement of meralgia paresthetica in Case 3.

Recent researches, called to our attention by Reichert,[6] have shown that peripheral nerves contain, in addition to somatic fibers, sympathetic fibers carrying vasomotor, pilomotor, and sudomotor efferent fibers, and afferent sympathetic fibers carrying pain impulses. If this be true, blocking of the sympathetic fibers would appear to be a more rational mode of treatment, and Reichert's reported cases bear this out. He found that paravertebral block with alcohol of the second and third sympathetic ganglia gave immediate relief; one case required reinjection due to incomplete block.

REPORT OF CASES

Case 1.—Miss A. G., a 21-year-old stenographer, complained of numbness and tingling of the outer portion of the right thigh. This area presented a normal appearance, but did not respond to painful stimuli or light touch. Temperature response was normal. Two months later the area seemed about the same in extent, but the anesthesia and tingling were definitely lessened in degree. Four months later the symptoms had completely disappeared, and have not recurred during a period of two and one-half years.

⁂

Case 2.—Mrs. J. D., a 25-year-old housewife, during the course of an examination for pregnancy mentioned that for two days previous to her visit she had noticed an area of numbness of the skin of the outer aspect of the left thigh. An area was found that did not perceive painful stimuli or light touch. There were no other abnormal findings. During the course of the ensuing two months the symptoms and physical abnormalities completely disappeared.

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[3] Rosenheck, C.: Meralgia Paresthetica: Its Relation to Osteoarthritis of the Spinal Vertebrae, J. A. M. A., 85:416 (Aug. 8), 1925.

[4] Stookey, Byron: Meralgia Paresthetica, J. A. M. A., 90:1705 (May 26), 1928.

[5] Bergsma, S.: Meralgia Paresthetica, J. of Nervous and Mental Diseases, 71:6 (June), 1930.

[6] Reichert, F. L.: Meralgia Paresthetica: A Form of Causalgia Relieved by Interruption of Sympathetic Fibers, Surg. Clin. of N. A., 13:1443 (Dec.), 1933.

Case 3.—Mr. T. M., a 22-year-old college student, complained of an area on the outer side of the right thigh (Figure 1) that was numb and tingled, and at times was slightly painful. An area was discovered about the size of one's hand where light touch and painful stimuli were not perceived. Symptoms gradually disappeared in the course of four or five months, and there has been no recurrence in five years.

None of these cases received treatment.

SUMMARY

1. Meralgia paresthetica is defined and its etiology, pathology, and treatment discussed.
2. The likelihood that the disease is not uncommon is suggested.
3. Histories of three cases are presented.

1904 Franklin Street.

PHLEBITIS: ITS TREATMENT

By Norman J. Kilbourne, M.D.
Los Angeles

In view of the frequent incidence of phlebitis, and the fact that six per cent of postoperative deaths are due to its sequelae, sepsis and pulmonary embolism, it is fitting that more attention be directed to its treatment.

Phlebitis, when not chemical, is caused by three factors: infection, plus either stasis or trauma, or both. The probabilities are strong that so-called traumatic thrombosis, over which there is now so much medico-legal discussion before the Industrial Accident Commission, occurs with infection as a contributing factor. The absence of a positive blood culture proves nothing. What is conclusive is the work of French surgeons, who cut down on the thrombus in "traumatic" thrombosis, and who repeatedly obtained heavy cultures of streptococcus and staphylococcus from the thrombus.[1]

Preventive Treatment. — Phlebitis, after operation, may be prevented by avoiding stasis in the veins. This requires that in postoperative care the patient must be taught to move his legs at least five times a day and take frequent deep breaths, beginning as soon as he comes out from under the anesthetic. This provision should be continued until he is out of bed. The leg movements propel the venous blood, and the deep-breathing movements of the thorax aspirate it.

Severe phlebitis, after injection of varicose veins, is due to infection. This infection may be prevented by using, in very large veins which are most susceptible to phlebitis, only the strongly bactericidal solution of quinin urethane.[2] This quinin is adsorbed into the endothelial cells.

ACUTE PHLEBITIS

Curative Treatment of Acute Phlebitis demands compression of the superficial veins with an elastic, linen-mesh bandage. If the phlebitis extends above the knee, it will be necessary to use, from the knee up, an adhesive elastic bandage, such as the elastoplast bandage, for the ordinary linen-mesh bandage will not stay on above the knee. The compression of these superficial veins is the outstanding factor in treatment. The compression bandage should be carried continuously up above the level of the phlebitis, for there is a strong opinion, which originated with the late Sicard of Paris, that an embolus is thus less likely to be liberated.

The common treatment by ice packs in acute phlebitis is dangerous: since the tissues suffer both from infection and venous stasis, and the lymphatic obstruction always associated with phlebitis, they have low resistance to the ice. One such patient who came to the author had a gangrene, due to the ice, extending from the ankle to the upper thigh and deep through the skin, and subcutaneous fat far down into the sloughing muscles. She was moribund. (Treatment of this ice-burn with tannic acid saved both the leg and the patient's life.)

Another still more common error is prolonged immobilization of the phlebitis patient in bed. This customary treatment is based on the ordinarily sound principle of treating infection with local rest to the part. It, however, overlooks blood stasis as a fundamental factor in causing phlebitis: the bacteria thrive on stagnant, degenerating blood elements. The modern procedure gets the patient out of bed early, and the results have justified the change. It takes some judgment to know how soon to get the patient out of bed. If this procedure is followed with good judgment, the danger of embolism is not as great as the danger of embolism from allowing venous stasis to continue by long bed rest. The common practice of keeping phlebitis patients in bed for seven weeks is strongly to be condemned.

CHRONIC PHLEBITIS

Treatment of chronic phlebitis requires bandage treatment as above. A few patients are not cured by the bandaging, and after a period of time, such as two or three months, they should be treated by high voltage x-ray, as described by Halban.[2] Roentgen treatment is of great value in old, chronic phlebitis, especially chronic phlebitis with edema. Roentgen treatment should never be used until the phlebitis has been chronic for a long time.

It is sometimes impossible to draw a sharp line between chronic phlebitis and Buerger's disease. In fact, phlebitis migrans probably is Buerger's disease. Too much emphasis cannot be laid on the prohibition of smoking in these cases.

Watch for the case of chronic phlebitis which shows no enlargement of the leg on the affected side. Many of these patients are no longer suffering from chronic phlebitis. Their misery is due to pes planus.

2007 Wilshire Boulevard, Los Angeles.

An Arab proverb runs as follows:
"The world is supported by four columns:
The justice of the great
The prayer of the righteous
The bravery of the valiant, and
The science of the physician."

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[1] Delater: Les Maladies des Veines, Masson et Cie, Paris. This is the greatest and most comprehensive study of diseases of veins ever written.

[2] Halban, Joseph: Strahlenbehandlung bei Thrombophlebitis, Wiener Klinische Wchnschr.; 43:1368 (Nov.), 1930.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

HAMMER-TOE

ETIOLOGY

Leonard W. Ely, M. D. (Stanford Hospital, San Francisco).—At first sight this seems a very simple question, but on further thought the question is not as simple as it seems. As usual, in foot deformities the shoe is blamed; and as the second toe is the one most often afflicted, the pushing of it over by the great toe is supposed to be responsible, but the great toe could just as well push over the other toes. Further, people wear about the same kind of shoes, but not one in a hundred, perhaps, is afflicted with this deformity. Again, even when the toes are deformed by tight shoes, they are not deformed in the peculiar manner of hammer-toe. And still, the peculiar stiff contracture of this deformity is difficult to explain on this hypothesis. Indeed, even when treatment is started early in life, the deformity is hard to correct.

Hammer-toe often begins in early life and, in spite of treatment, slowly progresses until it reaches its complete stage. It usually runs in families: either a parent or a grandparent of the patient will be found to have it; and of a number of children in the same family only one, as a rule, will have it. We are forced to the conclusion, therefore, that hammer-toe is a congenital deformity. This will account for its peculiar form, for its occurrence, and for its slow and steady increase until it reaches its full degree. It explains practically everything, in fact, about the causation of hammer-toe.

* * *

SYMPTOMS AND PROGNOSIS

Samuel S. Mathews, M. D. (1913 Wilshire Boulevard, Los Angeles).—The symptoms of this deformity are due entirely to the pressure of the shoe on the top of the flexed toe, and a downward thrust of the terminal phalanx onto the sole, thus resulting in painful calluses. The patient oftentimes has to resort to a very soft shoe or slipper, to be able to walk with any appreciable amount of comfort, and in desperation he is willing to have the toe removed, this being a request when frequently seeking medical aid for the first time. Most commonly affected is the second toe, in which the first phalanx is dorsiflexed and the second plantar flexed, while the third may be extended with the toe held fixed in this position. There is a constant pressure being exerted by the top of the shoe on the apex of the deformity and the resultant callus formation on the terminal phalanx. This condition must not be confused with the claw-like toes met with in various forms of talipes, in which all the toes are affected. These symptoms are much more severe and also much more difficult to treat, from a surgical standpoint. It is quite common to find hammer-toe associated with halux valgus. The large toe rides over the second one and maintains the second and third phalanx of the second toe in a constant plantar flexed position. After a time there is an adaptive shortening of the long tendons and lateral ligaments of the joints.

Prognosis.—The prognosis in these cases is indeed gratifying if properly treated. The milder cases will often correct themselves when a proper, well-fitted shoe is worn. In the young child sufficient amount of correction may be gained by constantly stretching the existing contracture, and in fixing an adaptive splint to the sole of the affected toe at night. In the more severe cases we can expect excellent results where a wedge-shaped excision is done, removing the articular cartilage of both sides of the joint, thus allowing the joint to ankylose in extension. Some advise the removal of the toe, which I feel is very unwise; because its absence many times leads to a disability worse than the original hammer-toe, and that is the tendency toward production of halux valgus.

* * *

TREATMENT

Ernest W. Cleary, M. D. (490 Post Street, San Francisco).—This appears to be a very small subject, but it is actually a source of distress out of all proportion to the size of the member involved. Someone has significantly parodied the saying, "Great oaks from little acorns grow" into the equally true statement, "Great aches from little toe-corns grow."

When a toe presents such a deformity that severe contracture of its flexor tendon has brought the end of the toe directly against the sole of the shoe, and the sharp angulation of the interphalangeal joint forces the dorsum of that joint into contact with the upper of the shoe, we call the deformity hammer-toe.

This deformity usually occurs in the second toe, but may be present in any one of the four smaller toes. The objective of treatment is to correct the deformity or to amputate the deformed toe.

Correction of Deformity. — This operation involves invading bone and joint tissue, and the parts should have a similar careful preoperative preparation to that which conscientious surgeons require before more extensive bone operations.

Preparation.—The whole foot back to the ankle should be thoroughly cleansed, with special attention to the area about the toe nail, either for two days prior to operation or twice during the day previous to operation.

Operation.—The mechanical objective of the operation is to shorten the toe so that it can be straightened out and lie in a normal position, with respect to the non-deformed toes and to the shoe. This is accomplished by taking a wedge-shaped mass of tissue with the base of the wedge on the dorsum of the toe and the width of the wedge base sufficient at the skin to remove all of the calloused part usually present over the angulated joint. In the center of the wedge-shaped portion removed from the bone lie the apposed joint surface of the phalanges. Both phalanges should be cut clear through with a small, very sharp chisel, not crushed with bone cutters or bitten away piece-meal with a rongeur. All of the articular cartilages of either face of the articulation should be removed. When the removal of the wedge has been completed and the tip of the toe has been lifted up toward the dorsum of the foot, until the interval left by the removal of the wedge is closed, the toe in this corrected position should be straight and normal in appearance, with relation to the other toes. Usually not more than one very fine, plain catgut suture is necessary to hold the subcutaneous tissues in apposition, and not more than three skin sutures of fine silk or dermal. Immobilization after operation should be definite for a period of at least fourteen days. Such immobilization can be effectively secured by bandaging the toe down firmly to a light aluminum splint on the plantar surface, and such splint should be somewhat racket-shaped, with the broad part fitting back under the ball of the foot. The surest and, in the writer's opinion, most effective form of immobilization is to enclose the foot in a light, well-padded plaster shoe extending back over the heel, but leaving the ankle entirely free. This plaster should be gently molded against the plantar and dorsal surfaces of the operated and adjacent toe. Stitches should be removed not later than the sixth day in order to minimize the degree of scar. For the second two weeks following operation only a very moderate amount of walking in well-fitting shoes should be permitted. The recovery should be sufficiently complete to permit any ordinarily strenuous use of the foot by the end of the fourth week following operation.

Amputation.—The indications for amputation are: (1) the presence of an infection caused by pressure on the dorsally angulated joint, and of such a degree that a satisfactory result from less radical measures is not reasonably to be anticipated; and (2) occurrence of the deformity in a little toe where the preservation of the toe is of lesser consequence and operation for the correction of the deformity is less likely to give a satisfactory result.

Laughter is the saving emotion of the human race, when genuine, for from its presence the cynic flees, the pessimist retreats, the misanthrope is driven to cover. Under its influence the sun shines in dark places, the birds bring again their choicest songs, the flowers lift their smiling faces, and the world becomes once more a worthwhile place in which to live.—Charles E. Whelan.

Conservation of Vision.—As a rule, neither tobacco nor alcohol directly affect the eyes, unless they have first attacked the general health, it is pointed out by Dr. Emanuel Krimsky, of Brooklyn, N. Y., answering some of the questions which are most frequently asked by patients, in a recent issue of "The Sight-Saving Review," quarterly journal of the National Society for the Prevention of Blindness (Summer, 1936).

"And yet," says Doctor Krimsky, "every eye specialist in every book on eye diseases gives prominent mention to blindness of varying degrees of severity from the prolonged and excessive use of either tobacco or alcohol in certain susceptible persons. It is extremely important to recognize blindness from tobacco or alcohol because immediate and complete abstention will often restore vision, unless the case has progressed too far. Wood alcohol blindness is permanent and cannot be cured."

The warning that a black eye may be more serious than funny is made by Doctor Krimsky as follows: "Among children—and sometimes among our alcoholic brethren—a black eye is regarded with honor, in the same sense that German students honor a scar on the cheek as evidence of duelistic prowess. If such an outward discoloration represented the whole story, we might have reason to laugh it away. But the inexperienced can see only skin-deep. It may be that the large majority of these cases can well survive the ordeal, even without having to go to a doctor. But that a certain number of these black eyes also show, on more careful examination, either a fracture of the skull or a hemorrhage into the eyeball with almost sudden blindness, is not generally known. It would seem reasonable, therefore, to submit all these eye injuries to medical examination, to avoid any possibility of permanent harm."

Regarding the danger of eyeglasses breaking and causing an injury to the eyes, he says: "However possible such an accident might seem, strangely enough, it very rarely occurs. Many busy eye specialists have never observed such a misfortune. And the reason is not difficult to understand. Those who wear glasses instinctively value their eyes more than those who do not, and the slightest shock or fear will automatically bring a sudden closure of the lids, with concomitant protection to the eye. For those who are not reassured, it is a comfort to know that lenses may now be obtained which are made of non-shatterable glass. This being the case, it is quite needless for a mother to deny her young child the safe glasses.

"More glasses are being worn now than in the past," Doctor Krimsky explains, "not because eyes are more defective—for they are not—but because the modern human has applied himself to occupations requiring close vision, unlike the pursuits of his forbears who lived on the soil, where close use of the eyes was seldom called into play. While eyes should be reexamined about once a year for glasses, and oftener in cases where eyes change more rapidly, it does not necessarily follow that lenses must be changed. For, while in some persons annual or biennial changes of glasses may be required, in others the same lenses may serve faithfully for ten or fifteen years."

To live in the temper and spirit of a learner, open-minded, unwarped in judgment, free as far as light permits from delusions, eager to explore and inquire, quick to give up a confuted idea and so gain a higher outlook, striving steadily to improve and to grow—these are watchwords of the intellectual life.

Eat less; chew more.
Waste less; give more.
Ride less; walk more.
Go less; sleep more.
Talk less; listen more.
Worry less; work more.
Idle less; think more.
Preach less; practice more.
Clothe less; bathe more.
Scold less; laugh more.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section (Adv. pages 2, 4 and 6).

CALIFORNIA MEDICAL ASSOCIATION

EDWARD M. PALLETTE........President
HOWARD MORROW........President-Elect
FREDERICK C. WARNSHUIS........Secretary-Treasurer

THIS MONTH'S TOPICS

ASSOCIATION ACTIVITIES

1. *Constitution and By-Laws.*
2. *Hippocrates.*
3. *Sources of Information.*
4. *Interdependence.*
5. *Have You Read?*
6. *Medical Progress.*
7. *Convention Echoes.*
8. *Hotels—Del Monte.*
9. *Inquiries.*
10. *Disciplinary Procedure Bulletin.*
11. *Minutes of Executive Committee.*

PUBLIC RELATIONS DEPARTMENT

1. *County Hospitals.*
2. *Finger Prints.*
3. *Forestry Medical Service.*
4. *Committee Minutes.*

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ASSOCIATION ACTIVITIES

CONSTITUTION AND BY-LAWS

Members are advised to preserve this issue, as it contains the revised Constitution and By-laws of the Association.

In 1929 a committee redrafted the Association's Constitution and By-laws and the House of Delegates adopted it. Since that time, seven years ago, certain amendments have been made at each annual meeting. The most important amendment is the one which deals with disciplinary action and presents a code of procedure. This amendment was adopted this year.

In order that members may have an up-to-date copy of our governing regulations, the entire Constitution and By-laws in revised form is reprinted.

Read it—save it.

* * *

HIPPOCRATES

History transmits the names of but few men whose influence has lasted longer or will continue as long as the physician-philosopher Hippocrates.

"Life is short, and Art is long; the occasion fleeting; experience fallacious and judgment difficult," pertains today as it did centuries ago when uttered by Hippocrates.

Every true physician should frequently ponder upon and remain imbued with the guiding inspiration of the Hippocratic Oath:

> I swear by Apollo the physician, and Aesculapius . . . I will keep this oath . . . I will follow that system of regimen which . . . I consider of benefit to my patients, and abstain from whatever is deleterious and mischievous . . . I will give no deadly medicine to anyone, if asked . . . With purity and with holiness I will pass my life and practice my art . . . Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption . . . Whatever I see or hear, in connection with my professional practice, or not in connection with it . . . which ought not to be spoken abroad, I will not divulge . . .

The oath closes with a prayer that, so long as it is strictly observed, the physician may be blessed of gods and respected of men, but that neither respect nor blessing shall dwell with him who violates it.

Bruce Barton recently wrote:

> What an achievement it is for a man to have set up a standard which has guided the thinking and practice of a whole profession for twenty-three centuries. It's a high standard and, to the eternal credit of physicians, a great majority of them make an honest effort to live up to it.

To which we would add the hope that members of our profession must make that majority so great that the renegade become foundered in the filthy mire of his own makings.

* * *

SOURCES OF INFORMATION

In the front and back advertising sections of each issue readers will find much useful information. Interspersed with the advertisements there are interesting reports from the Board of Medical Examiners, historical items, abstracts of important articles appearing in other publications and other comment.

In the advertisements you will find offerings of all types of medical and surgical supplies, books and approved hospitals and sanitariums. These advertisers are reliable firms and are your patrons. In turn they merit your patronage because they aid in making this journal possible. Patronize them, receive their detail men, favor them. They stand ready to be very helpful to you in many ways. Utilize this source of information. Read each issue from cover to cover. It will be profitable to do so.

* * *

INTERDEPENDENCE

Dr. Olin West, Secretary of the American Medical Association, once stated:

> Our whole purpose of life, of government and everything else these days seems to be to make it as easy as possible for the individual and the group. I think that is one of the evil tendencies of the times. The county medical society ought to do its own work for itself. There are things the State Association can do for it and ought to do for the county society, for the county society cannot do them. There are things the American Medical Association can do because the State Association cannot do them. There are things the state can do for a county, there are things the American Medical Association can do for the state, but ought not to do because those units ought to do their own work for themselves. A county society is only as strong as it makes itself. It is the obligation of every county society to make the strong ones stronger and to devise some plans to make the weak ones stronger. Whatever it may take to do that ought to be done.

This is a direct challenge to all officers and members. Its acceptance and consummation will create a cohesive interdependent, actively functioning group with every unit intermeshing smoothly and powerful for the fullest realization of our organizational objectives. Again it is team work and it's team work we need this autumn and fall. Personal ambitions and quests must be melted in this interdependent group.

* * *

HAVE YOU READ?

The minutes of the Coronado meeting were printed in the July issue. Have you read them? If not you are urged to do so.

This is your organization. Its functions and activities are determined by you through your delegates and by the constitution and by-laws. Your problems, medicine's problems, and the Association and county society problems can be satisfactorily met and dealt with provided that every member understands them. Their nature and meaning and their ultimate effects are outlined and policies are advanced by your committees and officers who devote an untold amount of time in considering and presenting them. These presentations can be found in the reports and minutes of the House of Delegates.

As a member, the duty is yours to familiarize yourself with the affairs of your organization. Having done so, two obligations rest upon every member. The first is to conform to and observe the recommendations and actions approved by your delegates. The second is to give some of your time in bringing about their fullest application. It matters not whether you live and practice in metropolitan centers or in the great wide open spaces of your state, yours is the responsibility to join in a united movement that will record a cohesive activity and an organization that does not simply "resolve" but applies the resolution so as to spell action.

Your suggestions are invited. Your advice is solicited. Your support is our plea.

* * *

MEDICAL PROGRESS

In his daily column, Irwin S. Cobb recently wrote: "I'd rather that every white rat in America should have the bubonic plague twice than that my grandbabies should have it once." So would any other humane and sensible person. Still there are those misguided and deluded persons who are circulating a petition to have an Initiative put upon the ballot this fall to prohibit animal experimentation.

Medical knowledge cannot be conjured out of the air. Unless the antivivisectionists are willing to let investigators experiment upon them, medical men will have to use animals or terminate medical progress.

The following figures indicate the progress that has been made:

In 1836, mortality per 100,000 was:

Smallpox	19.1
Malaria	42.8
Typhoid	65.5
Diphtheria no date, but in 1900 it was	70.5
Tuberculosis	248.3
All deaths	3,390.0

In 1934 we quote the following:

Smallpox	.03
Malaria	.1
Typhoid	.4
Diphtheria	1.9
Tuberculosis	57.5
All deaths	975.0

To these we add the following information from our own department of health:

A comparison of deaths in California in 1911 with deaths in 1935 reveals the tremendous savings that have been effected in human lives during the past twenty-five years, according to a report just issued by the California Department of Public Health in Sacramento.

In the infant group, the report shows that in 1911 10 per cent of all deaths in California were those of infants; in 1935 the percentage of infant deaths was only 5.5 per cent.

In children between 1 and 14 years were counted 7 per cent of all deaths in 1911; in 1935 the percentage in this group dropped to 3.3 per cent.

Among individuals from 15 to 44 years of age the percentage of deaths to the total was 28 in 1911, while in 1935 it was only 16 per cent.

The above figures indicate how preventive medicine and other precautions have contributed to fewer deaths under 44 years and the lengthening of life generally. Above 44 the figures, of course, show the opposite trend. In the group from 45 to 54 years of age, the percentages increased from 12 to 13 per cent; in the 55 to 65 year group the percentage increased from 13 per cent in 1911 to 17 in 1935, and above 65 it increased from 29 to 44 per cent.

In other words, 15 more persons out of every hundred live bepond 65 today than did in 1911.

The report further states that life is safer and longer in America than in any except the Scandinavian countries of Europe. People live from one to two years longer on the average in the United States than in England, France, Italy or Germany. This is not due alone to a favorable natural environment, but to no small degree from the cultivation and utilization of preventive medicine.

Surely medical progress has been made. Further progress must not be obstructed by misguided fools.

* * *

CONVENTION ECHOES

Our members will be interested in these letters. They are in answer to our letter thanking them for participating in our exhibit division.

Coca-Cola Company,
Atlanta, Ga.

California Medical Association,
Dr. Frederick C. Warnshuis, Secretary,
450 Sutter Street,
San Francisco, California.

Dear Doctor Warnshuis:

This is my first opportunity to thank you for your letter of June 3 inviting us to offer any suggestions concerning your commercial exhibit and its operation, in order that you might take such suggestions into consideration in planning for 1937.

We feel that our participation in your recent convention at Coronado was justified, and I am hopeful that the company may again wish to participate with you next year. We received many favorable comments about our booth, the way it was handled, etc., as well as complimentary references to the handling of the convention as a whole. This reflects great credit upon you and others who had to do with making the convention the success it was.

We do not have any suggestion to offer as to any changes, although we greatly appreciate your courtesy in affording the opportunity; and with best wishes, we are,

Most cordially,
COCA-COLA COMPANY.
ROY GENTRY, *Assistant to Mr. Harrison Jones.*

* * *

June 10, 1936.

Dr. F. C. Warnshuis, Secretary,
California Medical Association,
450 Sutter Street,
San Francisco, California.

Dear Doctor Warnshuis:

Thank you for your letter of June 3 in which you extended the Association's appreciation for our coöperation.

We thoroughly enjoyed our participation in the exhibit, but have no additional suggestions that we can make at this time.

With all best wishes, I am,

Sincerely yours,
DICTOGRAPH PRODUCTS COMPANY, INC.
DAN D. HALPIN,
General Sales Manager, Acousticon Division.

* * *

June 8, 1936.

Dr. Frederick C. Warnshuis, Secretary,
California Medical Association,
450 Sutter Street,
San Francisco.

Dear Doctor Warnshuis:

Thanks for your letter of June 3 in reference to the California Medical Association meeting in San Diego.

Mr. Davis, who represented us there, reports that it was a good meeting, allowing us an opportunity to meet many men who have been of help to us. It was certainly a better meeting for the exhibitors than last year's convention at Yosemite, which I attended.

Perhaps we are used to more seriousness in our medical meetings in the Mid-West and East, for it seems as though there is much more entertainment connected with your meetings than with ours. That seems to be the greatest difficulty as far as the exhibitors are concerned—namely, that the men are not in attendance at the meeting place and do not come through and visit the exhibits to the same extent as they do here. We exhibitors go to a lot of expense and time to be with you. It is a pleasure to be at your meetings and to meet a number of the men, but I believe we would be more satisfied if we could count on a larger percentage of the attending physicians to give attention to the exhibitions. Perhaps the fact that all your meetings are held at resort places—Yosemite, San Diego, Del Monte, etc.—is the reason for the greater holiday attitude. Your meetings held in San Francisco and Los Angeles at a convention hall centrally located would be an interesting experiment.

Please express my thanks to your committee and the officers of the California State organization for their courtesy and for the coöperation given us at your meetings. I hope sincerely that we will be with you again next year.

Sincerely yours,

BILHUBER KNOLL CORP.

E. Bilhuber.

* * *

California Medical Association,
450 Sutter Street,
San Francisco, California.
Attention: Dr. F. C. Warnshuis.

Gentlemen:

We acknowledge with thanks receipt of your letter of June 2, and wish to advise that according to report made to us by our representative, Mr. Callais, who was in attendance, your meeting was entirely satisfactory from our viewpoint, and in fact he particularly mentions that the comment among the exhibitors was that your 1936 session was one of the best meetings that they had ever attended.

We have requested Mr. Callais to send to us any suggestions he may be in a position to make concerning your commercial exhibits and their operation, and if any suggestions are advanced we will be very glad to forward them to you.

With very best wishes for the success of your association, we are,

Yours very truly,

Bard-Parker Company, Inc.

* * *

June 4, 1936.

Dr. F. C. Warnshuis,
450 Sutter Street,
San Francisco.

Dear Doctor Warnshuis:

The meetings of the Surgical Section of the recent meeting of the California Medical Association were well attended. At one time there was an attendance of well over 200.

I should like to suggest that, in the future, at least some papers from the Pathologic, Pediatric, Gynecologic and Radiologic Sections be given in the Surgical Section. It seems to me that there are too many sections going on at the same time. I feel that some of the smaller sections could be combined with surgery or with medicine without having those sections lose their own identity, perhaps letting them have one or two meetings in which they could take up the more theoretical problems of their own sections.

Yours very truly,

H. Glenn Bell, M.D.

* * *

June 3, 1936.

Dr. F. C. Warnshuis, Secretary,
California Medical Association,
450 Sutter Street,
San Francisco.

My dear Doctor Warnshuis:

As attorney for the Rhythm Foundation, please accept my personal thanks and the thanks of the Rhythm Foundation, first, for the opportunity of exhibiting at the recent convention of the California Medical Association at Coronado, and second, for the coöperation you extended to the Rhythm Foundation as exhibitors at the convention.

In the space of three and one-half days at the convention, the Rhythm Foundation distributed over 1,500 pamphlets, sold several hundred calculators, and took orders for approximately 100 books by Doctor Ogino, one of the originators of the Ogino-Knaus theory of birth regulation.

As for myself personally, I enjoyed the convention very much, for it enabled me to meet doctors from all over the state, and also a few doctors from out of the state. The convention also made me realize that the medical profession contains some of the finest men in the community, and enabled me to receive a very liberal education on many phases of medicine in the short space of three days.

I have attended many conventions, but yours was one of the best in my experience, and I trust we will be with you again at Del Monte next year.

Very truly yours,

E. K. Gubin.

HOTELS—DEL MONTE—1937 ANNUAL SESSION

The following arrangements have been made for hotel accommodations for our annual session in Del Monte, May 2-5, 1937.

1. Hotel Del Monte will be general headquarters.

2. *All* hotel reservations will be made by and through Mr. Carl Stanley, manager of Hotel Del Monte.

3. Members will select the accommodations desired in the following list of hotels and then request Mr. Stanley to obtain and confirm them.

4. Do not write to the hotels. *Write only to Mr. Stanley,* who is in sole charge of hotel reservations.

* * *

HOTEL DEL MONTE, DEL MONTE, CALIFORNIA

Rates, American Plan. Accommodations for between 650 and 700 persons

Both Wings:	*Per Day*
Single room without bath, one person	$7.50
Double room without bath, two persons	7.00
Single room with bath, one person	8.50
Double room with bath, two persons	7.50
Two single rooms, bath between, two persons	8.00
Two double rooms, bath between, four persons	7.00
Main Building, Cottages and Remodeled Wing Rooms:	
Single room with bath, one person	$9.50
Double room with bath, two persons	8.50
Sitting room	7.00

* * *

DEL MONTE LODGE—SAME MANAGEMENT AS HOTEL DEL MONTE

Pebble Beach, California

The Lodge is located approximately five miles from the Del Monte Hotel—*European Plan*

Main Building:

16 twin bedded rooms with bath from	$5.00 to $10.00 single 6.00 to 12.00 double
1 room, single only with shower bath	6.00
1 room, single only, with tub & shower	6.00
1 corner suite-parlor, twin beds, bath	$16.00 single—$20.00 double

Cottage Row:

Two cottages consisting of four bedrooms each, two baths and a sitting room, accommodating eight persons	$40.00
Ten individual bedrooms, medium sized, alternating with tub and shower baths, mostly twin beds—some with double beds:	
Single	7.00
Double	9.00

(Accommodations for approximately 70 at the Lodge.)

HOTELS IN CARMEL, CALIFORNIA

* * *

PINE INN, CARMEL, CALIFORNIA

Located in the heart of Carmel

Can accommodate from 150 to 200 persons

Room with twin beds and bath	$4.00 single 5.00 double
Rooms with twin beds and bath	3.50 single 4.00 double
Rooms, double beds, without bath—hot and cold running water	2.00 single 2.50 double
4 cottages (1 double and 1 single bed)	4.00 single 5.00 double
2 cottages (1 double and 1 single bed)	8.00 double 9.00—3 persons
4 cottages with 3 bedrooms and sitting room—4 or 6	15.00

Meal Rates—
Dinner, 85c; Luncheon, 65c; Breakfast, 35c and 50c

* * *

HOTEL LA RIBERA, CARMEL, CALIFORNIA

Located in the heart of Carmel—approximately five miles from Hotel Del Monte

Accommodates approximately 65 persons

Twin bedded rooms with bath	$5.00 per day
Twin bedded rooms without bath	3.50 and 4.00 per day
Double-bed rooms with bath	3.50 single 4.00 double
Double-bed rooms without bath	2.00 single 3.00 double

HIGHLAND INN, CARMEL, CALIFORNIA

Located four miles south of Carmel—approximately seven miles from Hotel Del Monte (European plan)

Accommodotions for approximately 80 to 100 persons

Half the accommodations with twin beds and half with double beds

Rates—Single	$3.50 per day
Rates—Double	4.00, 5.00 and 6.00 per day

* * *

LA PLAYA HOTEL, CARMEL, CALIFORNIA

Located in the heart of the town

Can accommodate approximately 90 persons

European Plan

Main Building:	
Rooms with twin beds and bath	$3.00, $3.50, $4.00 single 5.00, 6.00, 7.00 double
Rooms with double bed and bath	3.00, 3.50, 4.00 single 4.50, 5.00, 5.50 double
Rooms with double and single bed and bath	3.00, 3.50, 4.00 single 4.50, 5.00, 5.50 double
Suites of two rooms each—twin beds and bath between	3.00, 3.50 single 4.50, 5.00 double
In Bungalow:	
Two suites of two rooms, twin beds and bath between	2.50 single 4.00 double
One suite of three rooms, two double and one pair twin beds, one bath	2.00 single 3.50 double

Meal Charges—

Breakfast, 75c; Luncheon, $1.00; Dinner, $1.00.

Where three rates are shown, the lower is without ocean view, the next with partial view, the highest with full view.

HOTELS IN MONTEREY, CALIFORNIA

* * *

HOTEL MONTEREY, MONTEREY, CALIFORNIA

Located in the heart of the town—one mile from Hotel Del Monte. *European plan.*

Can accommodate approximately 58 persons

Rooms with bath, single	$2.50 per person
Rooms with bath, double	3.50 per person
Rooms without bath, single	2.00 per person
Rooms with bath, double	2.50 per person

Two of the twelve rooms with bath have two double beds each; these are family suites with two connecting rooms with bath off one of the rooms. These rent as follows:

Two persons	4.00
Three persons	5.00
Four persons	6.00

* * *

HOTEL SAN CARLOS, MONTEREY, CALIFORNIA

Located in the heart of Monterey—one mile from Hotel Del Monte—*European plan*

Can accommodate approximately 150 persons

Double rooms—double beds and shower baths	$4.00
Double rooms—double beds and tub baths	4.50
Twin-bedded rooms, having tub baths	6.00
Twin-bedded rooms, having tub baths	7.00

* * *

MISSION INN, MONTEREY, CALIFORNIA

Located in the heart of Monterey, Calif.—one mile from Hotel Del Monte—*European plan*

Can accommodate approximately 85 persons

Rooms with private baths	$3.00 single 4.00 double 4.50 & 5.00 twin beds
Three suites consisting of two rooms with bath	1.50 to 2.25 per person (Depending upon the number occupying suite)
Rooms (double beds) without bath	1.50 single 2.00 double

PACIFIC GROVE, CALIFORNIA

* * *

FOREST HILLS HOTEL

Located in Pacific Grove, California, approximately four miles from Hotel Del Monte

European plan

(Can accommodate approximately 100)

Double rooms with bath (two persons)	$3.50 per day
Twin-bedded rooms with bath (two persons)	4.50 per day

ASILOMAR—PACIFIC GROVE, CALIFORNIA

Located in Pacific Grove—about six miles from Hotel Del Monte. *European plan*

Can accommodate 157 guests

The Lodge contains twenty-one rooms with a guest capacity of twenty-eight

3 doubles with connecting tub bath	$3.00 per person
1 double with private toilet and balcony	3.00 per person
3 doubles with connecting toilets	2.00 per person
10 singles with connecting toilets	2.00 per person
4 singles convenient to toilet	2.00 per person

(All rooms have hot and cold running water and there is a large, comfortable living room with open fireplace in the lodge.)

Scripps contains thirty rooms with a capacity of thirty-nine guests

4 doubles with connecting toilets and tubs	$3.00 per person
4 doubles with connecting toilets and showers	2.50 per person
1 double with private toilets and showers	2.50 per person
21 singles with connecting toilets and showers	2.50 per person

(All rooms have hot and cold running water and there is a comfortable living room with open fireplace in Scripps.)

Guest Inn contains forty rooms and accommodates ninety guests

10 rooms to accommodate 3 people each	$1.00 per person
30 doubles	1.50 per person

In this building the toilets, showers and tubs are all detached, there is no running water in the rooms, but there is a comfortable living room with open fireplace.

Breakfast	35c, 40c and 50c
Luncheon	65c
Dinner	85c

* * *

INQUIRIES

For informative purposes the following indicates the average and nature of the inquiries received daily at the Association Headquarters office and which are, as a rule, answered on the day of receipt. They come from lay people as well as from physicians.

1. Names of state private mental sanitariums.
2. Local tenens wanted for three months.
3. Formula of an advertised patent remedy.
4. Radio broadcasting station asking merit of certain "water crystals" that manufacturer wishes to advertise over radio.
5. Present address of a physician.
6. Names of plastic surgeons in a given locality.
7. Reputation and standing of a certain school for backward children.
8. Request for locations.
9. Reciprocity rights.
10. Value of "Rhythm" theory.
11. Legal problem.

Some days as many as twenty to thirty such inquiries are received. The Association's offices are glad to receive and answer such requests. The endeavor is made to cause the public and the profession to learn that there is a central clearing place where dependable information can be obtained.

* * *

DISCIPLINARY PROCEDURE

After a year of investigation, study and drafting the Code of Disciplinary Procedure presented, by Doctor Roblee's committee, to the House of Delegates, was adopted at the Coronado session. That code is now a part of the by-laws of our Association.

Under instructions of the Council the following bulletin has been sent to every county secretary:

SPECIAL BULLETIN

To County Secretaries:

The attention of your county medical society is directed to the following enactments:

1. *Disciplinary Procedure*: The House of Delegates adopted as an amendment to the State Association's by-laws, a code of disciplinary procedure. (See minutes in July CALIFORNIA AND WESTERN MEDICINE.) This code must be observed when disciplinary action is instituted.

2. *County Society Action:* The Council adopted the following resolution:

"The procedure to be followed by this society with respect to censure, suspension or termination of membership of a member of this society shall be the procedure now or hereafter contained or provided for by the by-laws of the California Medical Association, as now existing, and as the same may hereinafter be amended. This section shall supersede any of the provisions of these by-laws in conflict herewith."

3. *County By-Law Amendments:* Each county society is, therefore, directed to comply with these enactments. Early action should be taken to amend your by-laws to cause them to conform to these state regulations and provisions.

It is extremely important that there be little delay in conforming to these instructions.

By direction of the Council.

Frederick C. Warnshuis, M.D.,
Secretary.

Fourteen years ago your secretary, in his Speaker's address to the American Medical Association House of Delegates, made the following recommendation:

"Our members have a direct obligation to the Association and to their associates. Precedents and rules of guidance for each individual must be established and must be observed by the whole without exception or favor."

At the recent American Medical Association meeting, Kansas City, Dr. Olin West declared that it was incumbent upon each constituent unit to look to the quality and character of its members and that those who violated our standards of ethics and professional conduct should be weeded out and be deprived of membership.

The Judicial Council of the American Medical Association is to be empowered to initiate proceedings against members and Fellows of the American Medical Association who are unprofessional in conduct and against whom their county and state organizations fail to institute proceedings.

President Pallette has stated: "There is something wrong with a licensed physician who is not a member of his county medical society and the public is learning to look askance upon the non-member."

We have repeatedly stated that society membership is a valuable asset. Courts have expressed similar opinions. We must maintain high standards of membership and discontinue the rights of membership to those who fail to live up to our principles of ethics, policies and standards.

As far as we know, California is the first state to formulate a code of procedure conforming to the law of the courts for disciplinary purposes. Our thanks are due Doctor Roblee and his committee for their excellent work.

County societies must not delay amending their by-laws so as to cause them to conform to the new regulations governing membership.

Minutes of the One Hundred and Forty-seventh Meeting of the Executive Committee of the California Medical Association

1. The Executive Committee of the Council of the California Medical Association met in monthly session in San Francisco on June 20, 1936, with the following members present:

President Edward M. Pallette, President-elect Howard Morrow, Speaker William W. Roblee, Chairman of the Executive Committee Karl L. Schaupp, Chairman of the Council Morton R. Gibbons, Chairman of Public Relations Committee Charles A. Dukes, Editor George H. Kress, Secretary F. C. Warnshuis and General Counsel Hartley F. Peart.

There were also present by invitation, J. B. Harris, E. T. Remmen, T. H. Kelly, Axcel E. Anderson, Louis A. Packard, Fred B. Clarke, Glenn Myers, C. G. Toland, Dewey R. Powell and Mr. Ben Read.

2. This being the annual meeting of the committee for the election of a chairman, the meeting was called to order by the secretary of the State Association, who asked for nominations for the office of chairman.

President Pallette nominated Karl L. Schaupp for the chairmanship. This nomination was seconded by Chairman of Public Relations Committee Dukes. There being no further nominations, a vote was taken and Doctor Schaupp was unanimously elected chairman of the Executive Committee for the ensuing year.

Doctor Schaupp then assumed the chair and the meeting thereupon proceeded.

3. **1937 Annual Meeting.**—The secretary presented information as to dates for holding our annual meeting in 1937 in Del Monte.

On motion of Chairman of Public Relations Committee Dukes, seconded by Councilor Gibbons, the dates of May 2, 3, 4 and 5, 1937, were designated as the dates for our sixty-sixth annual session.

4. **County Hospitals.**—Councilor Harris, chairman of the Committee on Public Relations, presented the problem concerning the movement which seeks through initiatives to open all county hospitals of this state.

Discussion was engaged in by Mr. Ben Read, of the Public Health League, and several of the committee.

It was moved by Chairman of Public Relations Committee Dukes, seconded by Speaker Roblee, that the Strategy Committee appointed by the president, in accordance with the action of the Council, under the supervision of and in coöperation with the Legislative Committee, be authorized to adopt such plans and institute such measures as will bring about the defeat of this legislative proposal. Carried.

On motion of Gibbons, seconded by Dukes, the president was instructed to appoint five southern members. Carried.

Dr. Dewey Powell, representing the San Joaquin County Medical Society, was present and submitted a statement as to the situation in that county and requested information, as well as advice, as to the attitude that is to be taken by the San Joaquin County Medical Society. The information requested was imparted to Doctor Powell for transmittal to the members of his county organization.

Upon motion of President Pallette, seconded by Councilor Gibbons, the Committee on Public Policy and Legislation, subject to the approval of the Auditing Committee, was granted an appropriation of $1,000 for preliminary campaign expenses.

5. **Supplement to Journal.**—The secretary reported that the supplement to California and Western Medicine, approved by the Council at its Coronado meeting, would cost approximately $350 and that the sending of this supplement as a separate pamphlet to all members would cost approximately $424. Discussion was had as to the advisability of mailing this supplement as a part of California and Western Medicine.

It was moved by Councilor Gibbons, seconded by Chairman of Public Relations Committee Dukes, that the matter of publication of this tax information material be referred to the Committee on Public Policy and Legislation and its associated Strategy Committee for their consideration and recommendation, whether it shall be published as a supplement to the official journal or shall be sent to our members under the auspices of the Public Health League or under the auspices of the Legislative Committee, and that the recommendation of the committee be transmitted to the Council. Carried.

6. **Committee on Activities and Expenditures.**—In accordance with councilor action, Councilor Gibbons stated that he had appointed as members of the Committee on Major Activities and Expenditures of the Association, C. E. Schoff, chairman; William W. Roblee and T. Henshaw Kelly.

It was moved by Chairman of Public Relations Committee Dukes, seconded by President-elect Morrow, that the appointments be approved. Carried.

7. **Forestry Medical Corps.**—The secretary reported on the reorganization of the Forestry Medical Corps and stated that the matter of the revocation of the charter of the old corps had been referred to Doctor Harris and Mr. Peart.

8. **Disciplinary Procedure.**—It was moved by Speaker Roblee, seconded by Councilor Gibbons, that county societies adopt the following amendment to their by-laws:

"The procedure to be followed by this society with respect to censure, suspension or termination of membership of a member of this society shall be the procedure now or hereafter contained or provided for by the by-laws of the California Medical Association, as now existing, and as the same may hereafter be amended. This action shall supersede any of the provisions of these by-laws in conflict therewith." Carried.

9. Financial Statement.—Financial statement for the month of May, 1936, as mailed to all members of the Council, was approved.

10. Library Contributions.—It was moved by President Pallette, seconded by Councilor Gibbons, that the California Medical Association donate 25 cents per member to Lane and Barlow Medical Libraries. Carried.

11. Appeals.—The secretary stated that a notice of appeal from the decision of the California Medical Association to the Judicial Council of the American Medical Association had been received from Ferd Callison, and that the attorney for the Kern members stated that he believed the deciplined members would appeal to the American Medical Association.

On motion of Editor Kress, seconded by Councilor Gibbons, the secretary was authorized to write to the secretary of the American Medical Association suggesting that it would be opportunely convenient for the California Medical Association if the Judicial Council could hold its hearings during the time of the annual conference of state secretaries and editors, at which time representatives of the California Medical Association would be present to make such oral statements as might be requested. Carried.

12. Physical Therapy Report.—The secretary presented the annual report of the Committee on Physical Therapy, and on motion of President Pallette, seconded by Speaker Roblee, the committee was continued. Carried.

13. Vivisection.—Letter from the San Diego society regarding vivisection as brought up by the Parent-Teachers' Association was presented. It was moved by Councilor Gibbons, seconded by Chairman of Public Relations Committee Dukes, that the correspondence be referred to the Committee on Public Policy and Legislation. Carried.

14. Pre-Convention Bulletin.—Upon motion of Editor Kress, seconded by Chairman of Public Relations Committee Dukes, the question of publishing a Pre-Convention Bulletin was referred to the next regular meeting of the Council.

15. Minutes of House of Delegates.—It was moved by Chairman of Public Relations Committee Dukes, seconded by Speaker Roblee, that the matter of publication of minutes of the House of Delegates verbatim be discussed at the next regular meeting of the Council and that the minutes of the sixty-fifth annual session be published in full in the July Journal. Carried.

16. Journal Costs.—The secretary reported, for the information of the Council, that the cost of publication of eight additional pages, based on 5,000 run of Journal, was $70; sixteen pages, $135, twenty-four pages $187, and thirty-two pages $250.

17. Cuts for Journal.—On motion of Editor Kress, seconded by President Pallette, the following resolution was adopted:

Resolved, That in all matters having to do with the printing and other typographical and editorial phases and work of CALIFORNIA AND WESTERN MEDICINE, sole authority and responsibility shall be vested in the editor, subject to instructions from the Council or Executive Committee.

18. Professional Cards.—The secretary presented correspondence from a member regarding publication of a professional card in the Journal, and stated that the Council had previously refused publication of said cards.

It was moved by Councilor Gibbons, seconded by Chairman of Public Relations Committee Dukes, that the previous policy of the Council rejecting publication of such professional cards be reaffirmed. Carried.

19. Nevada Society.—Editor Kress presented draft of a letter to be sent to the Nevada Society in accordance with action taken by the Council at the Coronado session.

It was moved by Councilor Gibbons, seconded by Chairman of Public Relations Committee Dukes, that the letter as presented be approved. Carried.

20. Adjournment.—There being no further business, the meeting adjourned.

KARL L. SCHAUPP, *Chairman.*
F. C. WARNSHUIS, *Secretary.*

CONSTITUTION AND BY-LAWS OF THE CALIFORNIA MEDICAL ASSOCIATION

CONSTITUTION*

ARTICLE I.—NAME

Section 1.—Name

The name of this organization is the California Medical Association.

ARTICLE II.—PURPOSES AND GENERAL ORGANIZATION

Section 1.—Purposes

The purposes of this Association are to promote the science and art of medicine, the protection of public health, and the betterment of the medical profession; to promote similar interests of its component county societies; and to unite with similar organizations in other states and territories of the United States to form the American Medical Association.

Section 2.—Organization

This Association, as a state unit of the American Medical Association, and as the state expression of the component county societies of California, shall have three major divisions: one, the Association as a whole, as when it meets in general session; two, the Scientific Assembly and its subordinate or related bodies; and, three, the House of Delegates and its subordinate or related bodies.

ARTICLE III.—COMPONENT COUNTY SOCIETIES

Section 1.—Component County Societies to Be Chartered

Component County Societies shall consist of those county medical societies which hold charters from the Association.

Section 2.—Geographical Scope

Only one component county society shall be chartered in any one county of the state; provided, however, when in the judgment of the House of Delegates it is deemed to be to the best interests of this Association, a charter may be granted to a component county society comprising two or more counties.

ARTICLE IV.—MEMBERSHIP

Section 1.—Kinds of Members

The members of the Association shall consist of the following:

(a) Active Members

Qualifications.—Active members shall comprise all active members of all the component county societies. No person shall be eligible for election to active membership in a component county society unless he shall hold the degree of doctor of medicine issued to him by an institution of learning accredited at the time of conferring such degree by the American Medical Association or the Association of American Medical Colleges. He must also hold an unrevoked license to practice medicine and surgery in the State of California; provided, however, that subject to the minimum qualifications prescribed by this Constitution and the By-Laws, each component county society shall be the exclusive judge of the qualifications of the members thereof.

Rights.—An active member shall have the right of suffrage and all other rights and privileges of the Association.

(b) Associate Members

Qualifications.—Associate members may be elected by the Council, upon recommendation of the component societies of the counties in which the associate members reside, from those doctors of medicine engaged in teaching or research work or holding positions in the Federal Service or otherwise, who are not licensed to practice medicine and surgery in the State of California and hence are not eligible for active membership, and from other persons engaged in medical teaching or research or other scientific work contributing to medicine and the public health.

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* This is the first official revision of the Constitution and By-Laws adopted on May 8, 1929. This revision is designated: Second Printing (Revised).

See also editorial comment in this issue (page 118).

Obligations and Rights.—Associate members shall have all the rights and privileges of active members except the right to vote or hold office. The dues of associate members shall be one-half of the dues of active members; and their dues to their respective component county societies (when such associate members are admitted to membership therein) shall be fixed by such component county societies.

(c) Retired Members

Qualifications.—Retired members of the California Medical Association shall be elected by the Council on the recommendation of any component county society from those active members thereof who cease the practice of medicine for reasons satisfactory to such component county society and the Council, and who shall have been active members of the Association for ten years or more prior thereto.

Obligations and Rights.—The dues of retired members shall be fixed by the Council.

Retired members shall be entitled to receive the publications of the Association at such rates as the Council from time to time may determine.

Retired members shall not have the right to vote or to hold office.

(d) Honorary Members

Qualifications.—The House of Delegates on recommendation by the Council may elect as honorary members any persons distinguished for their services or attainments as doctors of medicine or in the field of public health, or for research or other scientific work contributing to medicine.

Obligations and Rights.—Honorary members shall not pay dues, and shall not have the right to vote or to hold office.

ARTICLE V.—HOUSE OF DELEGATES

Section 1.—Composition of House of Delegates

The House of Delegates shall consist of:

(a) Delegates elected by the component county societies; and

(b) The officers of the Association enumerated in Section 1 of Article X of this Constitution.

Section 2.—Basis of Representation of Component County Societies

Each component county society shall be entitled to be represented by one delegate and one corresponding alternate for every fifty active members thereof, and also by one delegate and one corresponding alternate for each fraction of fifty active members in excess of fifty or multiples thereof as of the first day of November of the year preceding a current annual session.

Every component county society having less than fifty active members shall be entitled to be represented by one delegate and one corresponding alternate.

Section 3.—Alternates

One alternate eligible to service if any delegate of the delegation of a component county society is disqualified or fails to attend the meeting, shall be elected for each delegate by each component county society.

Section 4.—Terms of Delegates and Alternates; One Half Elected Each Year

Delegates and alternates shall be elected by the several component county societies respectively for a term of two years; one-half of the delegates and alternates representing each component county society as near as may be shall be elected each year.

Section 5.—Qualifications of Delegates and Alternates

Every delegate and alternate must be in good standing as an active member of the Association and of his component county society, and have been such at least two years immediately preceding his election.

Section 6.—Quorum

Thirty-five members shall constitute a quorum of the House of Delegates.

Section 7.—Legislative Functions of House of Delegates

The House of Delegates shall be the legislative body of the Association.

It shall at the regular annual session thereof elect the President-Elect, the Speaker and the Vice-Speaker of the House of Delegates, and such other officers as may be specified in this Constitution and By-Laws.

In accordance with the Constitution and By-Laws of the American Medical Association it shall elect the Delegates of the Association to the House of Delegates of the American Medical Association.

Section 8.—Issuance and Revocation of Charters

It shall issue component county society charters, upon the recommendation of the Council, to county medical societies which it deems and finds eligible therefor, and may, after notice to any component county society and due and proper hearing, revoke any such charter for cause.

Section 9.—Regrouping of Component County Societies Into the Councilor Districts

At least once in every ten years upon recommendation of the Council or upon its own initiative, the House of Delegates shall form and group or regroup the component county societies into the number of Councilor Districts as provided by the Constitution.*

Section 10.—Division of Scientific Work

The House of Delegates, upon recommendation from the Council or on its own initiative, shall provide for the division of the scientific work of this Association into appropriate sections.

Section 11.—Annual Per Capita Assessment of Dues

The House of Delegates at its regular annual session shall fix the amount of the annual per capita assessment of dues upon the active members.

Section 12.—Budget

The House of Delegates shall approve an annual budget to be submitted to it by the Council.

Section 13.—Councilor District Societies

The House of Delegates, upon recommendation of the Council or on its own initiative, may provide for the organization of such Councilor District Societies as will promote the best interests of the profession, such Councilor District Societies to be composed exclusively of members of component county societies.

Section 14.—Other Powers and Duties

The House of Delegates shall have such other powers and perform such other duties as are provided by the Constitution and the By-Laws.

ARTICLE VI.—REFERENDUM

Section 1.—How Referendum May Be Brought About

The House of Delegates at any meeting thereof at any regular or special session may by a two-thirds vote of all of its members, or the Council at any meeting thereof may by a three-fourths vote of all its members, submit any question, matter or proposition to all of the active members of the Association by mail, and a majority of the votes cast by mail by such members of the Association shall be final and bind and govern the Association upon the question, matter or proposition so submitted to the membership.

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* Component County Societies comprising the nine councilor districts, as approved by the House of Delegates, May 8, 1929, are as follows:

District No. 1.—Imperial, Orange, Riverside, San Diego, San Bernardino.[1]**
District No. 2.—Los Angeles.[1]
District No. 3.—Kern, San Luis Obispo, Santa Barbara, Ventura.
District No. 4.—Calaveras, Fresno, Inyo, Kings, Madera, Mariposa, Merced, Mono, San Joaquin, Stanislaus, Tulare, Tuolumne.
District No. 5.—Monterey, San Benito, San Mateo, Santa Clara, Santa Cruz.
District No. 6.—San Francisco.
District No. 7.—Alameda and Contra Costa.
District No. 8.—Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo, Yuba.
District No. 9.—Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Siskiyou, Solano, Sonoma, Trinity.

** See page 200 for explanatory note concerning amendments and the key number references to minutes of the House of Delegates in which the adoption of the amendments are noted.

Section 2.—Council to Determine Form of Referendum; Time of Voting; Canvass

The Council shall prescribe, fix and determine the form of the question, matter or proposition so referred to the active members and the time within which such vote shall be cast.

Each vote must be in writing and the same must be placed in a sealed envelope, the envelope bearing on the corner thereof the name of the voter. The envelope shall be mailed or delivered to the Secretary's office. The canvass thereof shall be made under the direction of the Council.

Section 3.—Referendum on Action of House of Delegates

The action of the House of Delegates shall be final and binding upon all members of the Association unless a referendum as herein provided is voted by the House of Delegates by a vote of at least two-thirds of the members thereof, at the same session at which the action was taken or the vote or resolution was had or adopted, or unless the Council by a three-fourths vote of all its members, shall within the period of thirty days after adjournment of such meeting of the House of Delegates vote to hold a referendum on such action, vote or resolution of the House of Delegates.

ARTICLE VII.—COUNCIL AND EXECUTIVE COMMITTEE

Section 1.—The Council

The Council shall consist of the Councilors, and ex-officio: the President, the President-Elect, the Speaker of the House of Delegates, and the Chairman of the Committee on Public Relations,[2] each with all the rights of a Councilor.

Subject to the provisions herein, the Secretary-Treasurer and the Editor shall also be ex-officio members of the Council, but without the right to vote.

The nine district councilors shall be elected as follows: Prior to the time set for the election of District Councilors, the delegates of each councilor district for which a councilorship is about to become vacant, shall meet, organize and in due form elect one or more members of the said councilor district, as a nominee or nominees for the said vacancy in such councilor district. Such nomination or nominations shall be submitted in writing, signed by at least two delegates who were present at such meeting, and shall be given to the Secretary-Treasurer, by him to be transmitted to the House of Delegates. The House of Delegates may make additional nominations from the floor of the house, and in the event that the delegates from a councilor district fail to submit a nomination or nominations, shall on its own account proceed to make nominations for each district councilor vacancy; and a vote shall then be taken by the House of Delegates to determine who shall be elected to the vacant councilorship.

All councilors-at-large shall be elected one by one from nominations made on the floor of the House of Delegates. Not more than two Councilors-at-large shall be elected from any one councilor district; provided, however, that when any one councilor district shall consist of a component county society having 1500 or more members, two of the councilors-at-large shall be elected from its membership.

Section 2.—Organization

At the first meeting of the Council held after the adjournment of the last meeting of the House of Delegates at the regular annual session of the Association, the Council shall organize by the election of one of the Councilors as Chairman of the Council who shall serve as such up to the first Council meeting held after the adjournment of the last meeting of the House of Delegates of the next succeeding regular annual session of the Association; and a Vice-Chairman who shall hold office for the same term, and who, in the absence of the Chairman, shall perform the duties of the Chairman.

The Secretary-Treasurer of the Association shall serve as the secretary of the Council.

Section 3.—Quorum

Nine Councilors shall constitute a quorum.

Section 4.—Regular Councilor Meetings; When and Where Held

The Council shall meet on the day preceding the annual session of the Association and daily during such session, and shall also hold at least three other regular meetings during the year, at least one of which shall be held in the southern part of the state.

The time and place of such meetings shall be fixed by the Council at a previous meeting and at least ten days' notice by mail shall be given each Councilor by the Secretary of the time and place of such regular meetings.

Section 5.—Special Council Meetings; Notice Where Held

Special meetings of the Council may be called by the Chairman at any time and he shall call such meeting upon the written request of at least three Councilors filed with the Secretary, stating the object of the proposed meeting. Written notice of the time, place and object of such meeting shall be given by the Secretary to all members of the Council at least seven days prior to such meeting. All special meetings of the Council shall be held at the office of the Association unless another place is selected by majority vote of all members of the Council.

Section 6.—Other Duties

(a) General Powers and Functions

Subject only to provisions of this Constitution and By-Laws and all resolutions and enactments of the House of Delegates, the Council shall be vested with full and complete power and authority to manage, control, use, invest, reinvest, lease, make contracts in respect of, and concerning, convey, give, grant, transfer or otherwise dispose of all property and assets of whatever kind or nature owned by the Association and shall also be vested with full and complete power and authority to do and perform all acts and to transact all business for and on behalf of the Association and to manage and conduct all the work and activities of the Association in carrying out the purposes thereof.

(b) Budget Report

Through its chairman, as otherwise provided, it shall submit a budget for each ensuing year to the House of Delegates.

(c) Annual Report

At the first meeting of the House of Delegates at each annual session it shall make a report on the state of the Association and its work and proceedings for the preceding year.

(d) Salaries of Officers and Employees

The Council shall fix the compensation of the officers, representatives and employees of the Association.

Section 7.—Auditing Committee

The chairman of the Council, subject to its approval, shall appoint an auditing committee of three members, designating one of the members as its chairman.

The Auditing Committee shall inspect all bills and claims against the Association, and no bill or claim shall be paid except upon voucher or draft having the approval of at least two of the three members of the auditing committee; provided, however, that any bill or claim may be paid without the approval of any member of the auditing committee by a majority vote or written approval of a majority of all the members of the Executive Committee.

Section 8.—Executive Committee

The Executive Committee shall consist of the President, the President-Elect, the Speaker of the House of Delegates, the Chairman of the Council, the Chairman of the Auditing Committee, the Chairman of the Committee on Public Relations,[3] the Secretary-Treasurer and the Editor.

(a) Officers

The Executive Committee shall elect its own chairman. The Secretary-Treasurer of the Association shall act as the secretary thereof.

(b) Quorum

Four members shall constitute a quorum.

(c) Duties and Powers

The Executive Committee shall aid and assist the officers and the Council in the transaction of the business of the Association in the intervals between the meetings of the Council. It shall have such additional duties and powers as are imposed upon it by this Constitution and the By-Laws. It shall have such advisory powers and such other duties as the Council shall from time to time determine.

(d) Records

It shall keep a record of its proceedings and report the same to the Council.

(e) Executive Committee Meetings

The Executive Committee shall meet on call of the President, the Chairman of the Council or the Chairman of the Executive Committee, on forty-eight hours' notice by mail or telegraph to the members thereof, if the meeting is to be held at the office of the Association; otherwise on at least three days' notice of the time and place of meeting.

(f) Authorization or Approval of Council Necessary

All of its acts and proceedings, unless expressly provided for by this Constitution and the By-Laws, shall be expressly authorized or ratified and approved by the Council.

ARTICLE VIII.—SCIENTIFIC ASSEMBLY

Section 1.—Objects

The Scientific Assembly of the California Medical Association is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine.

Section 2.—Sections

The Scientific Assembly shall be divided into sections, each section representing that branch of medicine described in its title.

Section 3.—Creation of New Sections

New sections may be created or existing sections discontinued by the House of Delegates. The Scientific Assembly and its sections shall be conducted in accordance with the provisions of this Constitution and the By-Laws, and such other instructions by the House of Delegates or the Council as may not be in conflict therewith.

ARTICLE IX.—SESSIONS AND MEETINGS

Section 1.—Annual Sessions of the Association, of the House of Delegates, and of the Scientific Assembly

The Association shall hold an annual session, during which there shall be at least two general meetings, open to all registered members, delegates, and guests.

At such annual session the House of Delegates and Scientific Assembly of the California Medical Association shall also hold meetings.

Section 2.—Time and Place of Annual Session

The time and place for holding each annual session shall be fixed by the Council, and due notice thereof shall be printed in the official journal of the Association.

Section 3.—Special Meetings; How Called; Notice Thereof

Special meetings of the Association may be called by a three-fourths vote of all the members of the House of Delegates or of the Council, and if so called shall be held at such time and place as the Council shall fix.

The Council shall cause written notice thereof, stating the object of the meeting, to be sent by United States mail, postage fully prepaid, to each active member of the Association, addressed to him at his office or place of residence as shown by the records of the Secretary's office, at least fifteen days prior to the date of meeting.

Section 4.—Regular Annual Sessions of House of Delegates

(a) Annual Session

The House of Delegates shall hold a regular annual session consisting of at least two meetings, the second whereof shall not be convened until at least twenty-four hours shall have elapsed subsequent to the convening of the first meeting.

(b) Place of Meeting

The regular annual session of the House of Delegates shall be held at the same place as the regular annual session of the Association, and the Council shall fix the times for the first two meetings.

(c) Notice of Meeting

The same notice shall be given of such sessions and the meetings thereof as that prescribed for the regular annual sessions of the Association.

Section 5.—Special Meetings of House of Delegates

(a) How Called

Special meetings of the House of Delegates may be called at any regular or special meeting of the Council, by a two-thirds vote of all the members of the Council, or by written call stating the object of the meeting, filed with the Secretary in the office of the Association and signed by one-half or more of the members of the House of Delegates.

(b) Time and Place of Meeting

Upon the filing of such call with the Secretary, the Council shall within thirty days thereafter fix the time and place for the holding of such special meeting and cause written notice thereof stating the object of the meeting to be sent by United States mail, postage fully prepaid, to each member of the House of Delegates, addressed to him at his office or place of residence, as shown by the records of the Secretary's office, at least fifteen days prior to the date of meeting.

Section 6.—All Meetings to Be Held in California

All meetings shall be held within the State of California.

Section 7.—Meetings Open to Members

All meetings of the House of Delegates, other than executive meetings thereof, shall be open to all members of the Association.

ARTICLE X.—OFFICERS

Section 1.—Officers

The officers of this Association shall be a President, a President-Elect, a Secretary-Treasurer, a Speaker of the House of Delegates, a Vice-Speaker of the House of Delegates, an Editor, the Chairman of the Committee on Public Relations,[4] and fifteen Councilors (six of the fifteen Councilors being elected as at large, and nine from Councilor districts, as herein provided.)

Section 2.—President-Elect—When and How Elected; Term of Office

The House of Delegates at the regular annual session thereof shall elect the President-Elect to serve until the adjournment of the final meeting of the House of Delegates at its next regular annual session. At the conclusion of the final meeting of the House of Delegates at its next regular annual session, such President-Elect shall assume the office of President, and serve as such for the term of one year thereafter, or until his successor assumes office.

Section 3.—Speaker and Vice-Speaker of House; When Elected; Term of Office

The House of Delegates shall at the regular annual session thereof elect a Speaker of the House of Delegates and a Vice-Speaker of the House of Delegates, each to serve for the term of one year, or until their successors are elected and assume office. The Speaker and Vice-Speaker shall be members of the House of Delegates at the time of their election.

Section 4.—Officers as Ex-Officio Members of Council

The President, President-Elect, Speaker of the House of Delegates, and Chairman of the Committee on Public Relations[5] shall be ex-officio members of the Council, with all the rights of Councilors.

The Secretary-Treasurer and the Editor shall also be ex-officio members of the Council, but shall not have the right to vote; provided, that a Secretary-Treasurer or an Editor who is not a member of the Association shall not be an ex-officio member of the Council.

Section 5.—Terms of Councilors

Each Councilor shall be elected for a term of three years.

Section 6.—Councilors to Be Elected in Different Years

Three District Councilors and two Councilors-at-Large shall be elected each year.

Section 7.—Councilors; Method of Election

When Councilor positions become vacant, or when regular Councilor terms expire and necessitate an election, then such elections shall always be for specific councilorships, one by one, until all such emergency or regular vacancies shall have been filled.

Section 8.—Council Appointments to Fill Vacancies in Office

The Council by appointment shall fill any vacancy in office not otherwise provided for in this Constitution or the By-Laws, which occurs during the interval between the annual sessions of the House of Delegates. Such appointee shall serve until his successor has been elected and has assumed office.

Section 9.—Election of Councilors on Adoption of This Constitution

Upon the adoption of this Constitution, the House of Delegates shall proceed to elect Councilors as follows: At the annual meeting at which this Constitution is adopted, the Councilors of the First, Fourth and Seventh Districts and two Councilors-at-Large shall be elected; in the succeeding year the Councilors of the Second, Fifth and Eighth Districts and two Councilors-at-Large shall be elected; and in the year succeeding, the Councilors of the Third, Sixth and Ninth Districts and two Councilors-at-Large shall be elected; and so on in sequence in the years to follow.

Where there is a conflict with the above provisions, as regards the time of expiration of office of any Councilors holding office at the time this Constitution is adopted, then the terms of such Councilors holding office and the terms of the Councilors elected upon the adoption hereof shall cease at such times so that the above provisions may become operative; and any lapses of continuity of office arising through the above provisions shall be filled by the House of Delegates or the Council, as in the case of other vacancies.

When a component county society shall have more than fifteen hundred members, two of the Councilors-at-Large shall be elected from its membership. The district Councilor from each such county, and the two said Councilors-at-Large shall each be elected in different years in calendar sequence.

Section 10.—Powers and Duties of the President-Elect

The President-Elect shall act for the President in his absence or disability, and if the office of President becomes vacant the President-Elect shall then succeed to the Presidency to serve as President for such unexpired term and for the term of one year thereafter.

Section 11.—Election of Council Chairman; Council Vice-Chairman; Secretary-Treasurer; Editor and Associate Editors

The Council, at the organization meeting thereof, shall elect a Chairman, a Vice-Chairman, a Secretary-Treasurer, an Editor; and in its discretion, one or more Associate Editors, each to serve for the term of one year.

Section 12.—Qualifications of Secretary-Treasurer and Editor

No person shall be eligible to the office of Secretary-Treasurer or Editor or Associate Editor who does not hold the degree of Doctor of Medicine, but membership in this Association shall not be a necessary qualification for the offices of Secretary-Treasurer, Editor or Associate Editor.

Section 13.—When Terms of Office of Speaker, Vice-Speaker and Councilors Begin

The terms of office of the Speaker and Vice-Speaker of the House of Delegates (which terms are herein generally stated to be one year) and the terms of office of the Councilors (which terms are herein generally stated to be three years) shall commence immediately upon the adjournment of the last meeting of the House of Delegates of the regular annual session of the Association at which such officers are elected, and shall continue up to the adjournment of the last meeting of the House of Delegates at the annual session of the Association of the year in which the term of office ends.

Section 14.—Officers to Hold Office Until Successors Are Elected and Assume Office

Every officer shall hold office until his successor has been elected and has assumed office either in person or by announcement.

Section 15.[6]—Manner of Election, Term of Office and Duties of the Chairman of the Committee on Public Relations

Shall be as provided for in the By-Laws.

ARTICLE XI.—FUNDS, PROPERTY AND ASSESSMENTS

Section 1.—Annual Assessment of Dues—Other Sources of Funds—Appropriations

Funds shall be raised by equal annual per capita assessment of dues upon the active and associate members, the assessment of dues upon the associate members to be one-half of that upon the active members.

The amount of the assessments shall be fixed by the House of Delegates by a majority vote of the members present and voting.

Funds may also be raised by voluntary contributions, through bequests, legacies, devises and gifts, and from the Association's publications, by special assessments and in any other manner approved by the House of Delegates.

All resolutions providing for appropriations shall be referred to the Council and all appropriations approved by the Council shall be included in the annual budget.

Section 2.—All Funds and Moneys to Be Paid to Secretary-Treasurer and Deposited with Depositary

All funds and moneys received for the Association by any officer or agent thereof shall be promptly paid to the Secretary-Treasurer and by him deposited with a depositary selected as such by the Council.

All depositaries selected by the Council shall be banks or trust companies duly licensed to transact business as such in the State of California.

Section 3.—Membership Interest in Association Property

No person other than an active member in good standing shall have any interest in the property of the Association and the interest of any active member therein shall cease when he ceases to be a member of the Association.

If any active member shall resign or otherwise cease to be an active member of the Association, all of his interest in and to all property of the Association shall cease and such cessation of membership shall operate as a release and assignment to the Association of all the right, title and interest of such member in and to all the property of the Association.

ARTICLE XII.—PUBLICATIONS

Section 1.—Scientific Journal

The Association shall publish and distribute an official journal in the interest of the Association and of its members, devoted to the advancement of medical thought and science, to medical organization, and for the dissemination of medical and public health information.

Section 2.—Annual Directory

The Association may[7] publish an annual directory of members, with such other information as the Council may direct.

Section 3.—Pre-Convention Bulletin

The Association, prior to the annual session, shall print a pre-convention bulletin, which shall contain reports of officers and committees; provided, that the Council shall have the right to delete or modify such reports, and provided further, that committees whose reports have been deleted or modified shall have the right to submit them to the House of Delegates in their original form if the committees so desire.

A copy of the pre-convention bulletin shall be given to each delegate and alternate, on or before registration.

ARTICLE XIII.—INCORPORATION

Section 1.—Incorporation

To aid in carrying out the objects of the Association, the House of Delegates at any meeting of any regular or special session thereof may by a two-thirds vote of the members thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of a non-profit corporation under the laws of the State of California, without capital stock, with such incorporators, name, purposes, objects, principal place of business, term, number of directors and directors to serve for the first year and until their successors are elected and have accepted office, and with such provisions regarding the voting power and property rights and interests of the members of the corporation and such further provisions in the Articles of Incorporation thereof, and with By-Laws and composed of such members representing this Association as the Council shall prescribe, fix and determine. The House of Delegates may at its option in connection with the granting and giving of such authority, power and direction to the Council, prescribe, fix and determine any or all of such matters pertaining to the said corporation, its Articles of Incorporation and any provision thereof, By-Laws and membership, and its action thereon shall bind the Council; and the House of Delegates at any meeting of any regular or special session thereof may by a two-thirds vote of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey and deliver, or cause to be granted, assigned, transferred, conveyed and delivered to the said corporation upon the formation thereof without any consideration therefor, any property, real or pesonal, of the Association, which authorization, power and direction may be given prior or subsequent to the formation and organization of said corporation.

Section 2.[8]

To further aid in carrying out the objects of the Association, the House of Delegates at any meeting at any regular or special session thereof may, by a two-thirds vote of the membership thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of one or more corporations under the laws of the State of California with such incorporators, name, purposes, county where the principal office for the transaction of business is to be located, first directors, the total numbers of shares, the aggregate par value, if any, of all shares, classes of shares, par value of any shares having par value, statement of the provisions, privileges and restrictions granted or imposed upon the respective classes of shares, or if the corporation be formed without capital stock the authorized number and qualifications of its voting and other rights of each class of members and the liability of each and all classes, to dues or assessments, and with such further provisions in the articles of incorporation thereof and with such by-laws as the Council shall prescribe, fix and determine; and the House of Delegates at any meeting of any regular or special session thereof may, by a vote of two-thirds of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey or deliver or cause to be granted, assigned, transferred, conveyed or delivered to any of such corporations upon the formation thereof or to applicants for health and accident or other insurance in or from any of said corporations at or prior to the formation thereof without any consideration therefor, such funds and property, real or personal, of this Association as the House of Delegates shall from time to time authorize or ratify.

ARTICLE XIV.—SEAL

Section 1.—Seal

The Association shall have an Association seal consisting of a circle having on the circumference the words "California Medical Association, Eureka, 1856," with such further emblems, figures and words as the House of Delegates, on recommendation from the Council, shall prescribe.

The power to change the seal shall rest with the House of Delegates.

ARTICLE XV.—AMENDMENTS

Section 1.—Procedure to Amend Constitution

Any member of the House of Delegates at any meeting of any regular annual session thereof may present an amendment or amendments to any article or articles or any section or sections of any article or articles of this Constitution.

Such proposed amendment or amendments shall be in writing and shall be filed with the Secretary and shall thereafter be published at least twice in separate issues of the official journal of this Association prior to the next regular session of the House of Delegates.

At the said next regular session of the House of Delegates, such proposed amendment or amendments shall be submitted to the House of Delegates, for consideration at any meeting of the House of Delegates during that annual session, and if two thirds of the Delegates present and voting vote in favor thereof, the same shall be adopted.

ARTICLE XVI.—REPEAL OF ALL PROVISIONS OF EXISTING CONSTITUTION

Section 1.—Repeal of Existing Constitution

All articles and all sections and all parts of all articles of the existing Constitution are hereby repealed.

BY-LAWS

CHAPTER I.—COMPONENT COUNTY SOCIETIES

Section 1.—Component County Society Charters

The charter of each component county society shall provide that all the provisions of the Constitution and By-Laws of this Association in force at the time of the issuance of such charter, together with all amendments to either thereof thereafter adopted, in so far as the same are applicable, shall be an integral part of the Constitution and By-Laws of the component county society to which the charter is issued and that the terms and provisions thereof shall control and govern such component county society, the officers and members thereof, and that the constitution and by-laws of the component county society shall not be amended in any way to conflict or be inconsistent with the Constitution and By-Laws of this Association. Each charter shall be signed by the President and the Secretary-Treasurer of this Association.

Section 2.—Revocation of Component County Society Charters

The charter of any component county society may be revoked by the House of Delegates if, after the filing with the Secretary-Treasurer of this Association of a written petition or protest signed either by the Chairman of the Council pursuant to resolution adopted by the Council by the affirmative vote of two-thirds of all the members thereof, and after due notice of hearing and after hearing thereof, the House of Delegates by a two-thirds vote of its members decides that the provisions of the Constitution or By-Laws of this Association or of the charter of such society have been breached by such society or that such society has committed acts or conducted itself in conflict with the Constitution, By-Laws or purposes of this Association to such extent as to make such revocation desirable in the best interests of this Association.

Section 3.—(a) Geographical or Specialty Sections

A component society may authorize the formation and existence of branch geographical or specialty sections for scientific investigation and work only, and the members of such geographical sections or specialty sections must be members of such component county society.

(b) Members in Sections to Be Members of Respective Component County Societies

No geographical or specialty section shall be permitted to have any classes of members, which classes in whole or in part include non-members of the component county society of which any such geographical or specialty section is a branch or subdivision; provided that nothing in this section shall be construed as limiting the guest privileges of such nonmembers at meetings of such sections.

Section 4.—Component County Societies Exclusive Judges of Qualifications of Applicants for Membership

Each component county society shall, subject to the minimum requirements for eligibility as provided by the Constitution, determine the qualifications for membership therein, and shall be the sole judge of the qualifications of applicants for such membership.

A member must not practice or claim to practice, support, coöperate with or in any other way endorse any exclusive or sectarian system of medicine. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association and to such as may from time to time be adopted by the California Medical Association, and shall recognize the authorized officers of his component county society and of this Association as the proper authority to interpret any doubtful points in ethics.

Every applicant for membership in a component county society shall fill out and sign in duplicate the application blanks provided by the society, which prescribe the necessary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of this Association.

Section 5.—Component County Society Rosters of Members and of Licensed Physicians in Counties

The secretary of each component county society shall keep a roster of its members and of the nonaffiliated registered physicians of the county, on which shall be shown the full name, address, school and date of graduation, date of license to practice in this State and such other information as may be deemed necessary. In keeping such roster the component county society's secretary shall note and at once notify the Secretary-Treasurer of this Association of any changes in the personnel of the profession, by death, by resignation, or by removal to or from the county, and in making his annual report he shall endeavor to account for every physician who has lived in the county during the year. The secretary of each component county society shall make a monthly report to the Secretary-Treasurer of this Association upon such forms and including such subjects as are herein provided, and as the Council may authorize.

CHAPTER II.—MEMBERSHIP[9]

Section 1.—What Constitutes Membership

The name of a doctor of medicine on the official roster of this Association, after it has been properly reported by the secretary of his component county society, and after the dues or other assessments due this Association shall have been paid by the component county society for each such member according to the class of membership held by each component county society member, shall be prima facie evidence of membership, and of his right to register at the Annual Session.

Section 2.—Termination of Membership

(a) By Expulsion from Component County Societies

Expulsion from any component county society, after due proceedings in accordance with these bylaws, upon becoming final terminates all the rights and privileges in this Association of the member so expelled.

(b) By Failure to Pay Dues

If the annual assessment of dues, payable to this Association by any member of this Association, is not paid on or before April 1 of any year, such member shall automatically lose his membership in this Association as of April 1 of such year. The Council of this Association, in its discretion, upon payment of such unpaid dues, and any other assessments or dues accruing thereafter, may at any time reinstate such member.

(c) By Revocation of Physicians and Surgeon's Certificate

Any active member whose license to practice medicine and surgery in the State of California is revoked shall, upon receipt of written evidence of such revocation by the Secretary of this Association, thereupon cease to be a member of this Association.

(d) Acts and Conduct Subjecting Member to Censure, Suspension or Expulsion by Component County Society

Any active member of a component county society who has been adjudged guilty of a criminal offense involving moral turpitude, or who has been duly adjudged guilty by his society, in accordance with the procedural requirements of these by-laws, of gross misconduct as a physician or a surgeon or of a violation of any of the provisions of the constitution or by-laws or principles of professional conduct of his society or of the principles of medical ethics promulgated from time to time by this Association or by the American Medical Association, shall be subject to censure, suspension or expulsion from his society by such component county society.

(e) Right of Committee on Membership and Organization of This Association to Prefer Charges

If a member of this Association is believed by the Committee on Membership and Organization of this Association to be guilty of conduct justifying censure, suspension or expulsion from his component county society, said committee may prefer written charges in the form and in the manner hereinafter specified with the secretary of the accused member's county society and may, through a member or members thereof, perform all acts that are reasonably necessary and proper in the prosecution of said charges.

Section 3.—Procedure to Be Followed by Component County Societies with Respect to Involuntary Loss of Membership

(a) Disciplinary Procedure for Component County Societies

The procedure to be followed by each component county society with respect to the censure, suspension or expulsion of a member shall be:

(1) Charges; Formal Requirements; A Formal Charge Must First Be Made.—Such charge must be in writing, signed by the accuser, and if made by a person other than a member of the Society must be sworn to before an officer of the State of California authorized to administer oaths. Charges must state the acts or conduct complained of with reasonable particularity.

(2) Charges; Filing; Secretary's Duties; Presentation to Board of Directors (or Grievance Committee).—Charges must be filed with the secretary of the accused member's component society. At the first regular or special meeting of the Board of Directors of such component county society held after charges are filed, the secretary must present said charges to the Board. The Board of Directors shall then or at any adjournment of said meeting, but not more than thirty days after the date of such regular or special meeting, consider the charges, and in its discretion determine whether or not further proceedings shall be conducted. If the Board determines that no further action shall be taken, the charges shall be dismissed.

If a component county society has no board of directors and more than ten members, its members must, at a regular meeting of the society, elect a grievance committee of not less than five (5) active members in good standing; two members shall be designated by the society to serve for a period of one year, two members shall be designated to serve for a period of two years, and one member shall be designated to serve for a period of three years. At the expiration of the terms of office of the respective members of such committee, successors shall be elected in like manner to serve for a period of one year each. Such grievance committee shall exercise all the power and perform all the duties herein conferred upon boards of directors in the manner and within the times herein provided. If a society has less than eleven members, the entire society, exclusive of the accuser and accused, shall constitute the grievance committee. All references herein to board of directors shall be deemed to include boards of councilors and such grievance committees, and component county societies of ten members or less.

(3) Service of Charge Upon Accused.—If the Board of Directors determines that further action, with respect to said charges, shall be taken, the Board must, within fifteen (15) days after such decision, cause a copy of the charges to be served upon the accused by personally delivering a copy thereof to him, or by depositing a copy thereof in the United States mail, registered and addressed to the accused either at his last known office or at his last known residence.

(4) Time and Place for Hearing; Service of Notice Thereof.—The Board of Directors shall, at said meeting at which its decision to proceed is made, fix a time and place for a hearing of said charges. Written notice of the time and place set for the hearing shall be served upon the accused within fifteen (15) days by personal delivery or registered mail as aforesaid.

The time so set for a hearing shall be not less than fifteen (15) days after the accused has been served, as aforesaid, with a copy of the charges and with the notice of the time and place set for the hearing; said hearing must be held within the county in which the accused holds his county society membership. The hearing before the board of directors must actually commence within six months from the date of the filing of written charges. Failure to comply with this requirement shall constitute an automatic dismissal of the charges.

(5) Right of Accused to Answer; Time to Answer; Formal Requirements.—The accused may, not less than five (5) days before the time set for a hearing, answer said charges. The answer shall be in writing and the original and three copies shall be filed with the secretary of the Society; provided, however, that the failure of the accused to answer shall not be deemed to be an admission of the truth of the charges or a waiver of the accused's right to a hearing with respect to said charges.

(6) Rules Governing Hearing; Duties of Referee of Society; Advice As to Procedure Only.—The Board of Directors shall give ample opportunity both to the accuser and the accused to be heard in person, and to present all testimony, evidence, or proofs which the accuser or the accused may deem necessary, provided that the Board may reject all testimony, evidence, or proofs, which in the judgment of the Board are immaterial, irrelevant or unnecessarily repetitious.

The Board in its discretion may be represented by a referee who may, but need not be a member of this Association and who shall be appointed by the Council or Executive Committee of this Association (that is, the California Medical Association) to advise the Board, the officers of the Society, the accuser and the accused, with respect to procedure only. It shall be the duty of said referee to answer all procedural questions submitted by said persons and, on his own initiative, to call attention to any procedural errors.

(7) Record of Proceedings; Shorthand Reporter Discretionary; Duty of Secretary to Preserve Board Records; Right of Accused to Copy.—The secretary shall preserve the original of said charges with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, the original notice of the time and place set for the hearing with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, and the original of the answer filed by any member accused if an answer be filed. At the hearing, the Board of Directors may, in its discretion, and at the expense of the Society, employ a competent shorthand reporter to record and transcribe into typewriting testimony adduced on behalf of the accuser and the accused. If the Board shall decide not to employ a reporter, then the secretary of the Society shall be present and shall keep and prepare a summary of all testimony adduced. The original charges with certificate of service thereof, the original notice of time and place for hearing with certificate of service thereof, the answer or answers, may be filed, if any be filed, all documentary evidence introduced at the hearing, all typewritten transcript of the testimony or the secretary's typewritten summary, and the written decision of the Board of Directors shall constitute the record of the entire proceedings. The secretary shall, upon receipt of a sum sufficient to defray the cost thereof, cause a copy of such record to be transcribed and furnished to the accused. The secretary shall keep such record and, in the event of an appeal to the Council of this Association, shall, upon the request of its secretary, transfer said record to the Council.

(8) Decision of Board; When Must Be Written; Rules Governing Vote of Board.—The Board of Directors, after having given the accuser and the accused member full opportunity to be heard, shall conclude the hearing and shall render its decision in writing not more than thirty (30) days thereafter. Hearing shall include any oral arguments and the filing and consideration of any written briefs. The Board of Directors by a two-thirds affirmative vote of all of the

eligible members of the Board present and voting may exonerate or may censure, suspend or expel the accused member as the facts in its opinion may justify.

The decision of the Board of Directors may be expressed in resolution adopted by said vote. The decision may not contain an opinion and need only be signed by the secretary or the acting secretary of the component county society.

The failure of at least two-thirds of all the members of the Board of Directors present and voting to agree upon the disposition of the charges shall act automatically as a dismissal of the same. No member of the Board of Directors not present at the said hearings for the entire time thereof shall be entitled to vote with respect to the disposition of the charges.

(9) Suspension; Maximum Period; Status of Suspended Member.—If the Board of Directors shall determine to suspend an accused member, the term of such suspension shall be within the discretion of the Board, provided that in no case shall a member be suspended for a period greater than one year. A suspended member shall have no rights or privileges in the Society, provided that at the expiration of the period of suspension such suspended member shall not be reinstated to membership in good standing until he applies for reinstatement and pays all dues accrued during said period of suspension."

(10) (a) Board's Decision; Secretary to Send Copies.—Within ten (10) days after the decision of the Board of Directors, the secretary of the Society shall transmit a copy of the decision to the Board, to the accused member or members and to the secretary of this Association.

(b) Board's Decision Final.—Subject to Appeal.—The action of the Board of Directors of a component society shall be final, subject only to appeal to the Council of the California Medical Association in such cases as are provided in these by-laws.

The decision of the Board of Directors shall not become effective until the expiration of ten days after time during which an appeal may be taken to the Council of this Association. Filing an appeal with the secretary of this Association shall automatically stay the execution of the decision of the Board of Directors of the component county society until written notice of the action of the Council of this Association with respect to appeal has been received by the secretary of the component county society from which the appeal was taken.

(c) Technical Rules of Evidence Not to Govern Disciplinary Hearings.—All hearings with respect to the disposition of charges against a member of a component county society shall be held and conducted in such manner as to ascertain all the facts fairly to the accuser and accused, eliminating all formal or technical rules and requirements which ordinarily pertain to judicial proceedings.

(d) Members Agree That No Cause of Action Shall Accrue.—Any person so charged, censured, suspended, or expelled shall have no claim or cause of action against this Association, a component county society or any member, director, councilor or officer, thereof by reason of such charges, or the hearing or the consideration thereof or censure, suspension or expulsion therefor.

(e) Expelled Members; Right to Apply for Membership; When Accrues.—Any person whose membership has been involuntarily terminated in a component county society by reason of violation of these by-laws may apply for membership after the expiration of one year from the date said membership was terminated, and such application shall be considered in the same manner as a new application for membership.

Section 4.—Procedure for Appeal to Council

A member of a component county society censured, suspended or expelled by his county society may appeal from the action of such component county society to the Council of this Association within the period of two months succeeding the date of such censure, suspension, or expulsion. Appeals shall be in writing and be filed within the said period of two months in the office of the secretary of this Association. Upon the filing of an appeal the secretary shall present it to the first subsequent meeting of the Executive Committee or the Council. Appeals shall be heard by the Council only after reasonable notice of not less than ten (10) days in writing of the time and place of the hearing of the appeal has been given to the appellant member and the president and secretary of the component county society as provided in Section 3 hereof.

Section 5.—Rules Governing Appeals

In hearing appeals, the Council shall review all questions of procedure, and may, in its discretion, review the evidence contained in the record of the original proceedings held before the Board of Directors of the component county society. The Council may make findings of fact contrary to, or in addition to, those made by said Board of Directors. Such findings may be based on the evidence adduced before said Board of Directors, either with or without the taking of evidence by the Council. The Council shall use any lawful means which in its judgment will best and most fairly present all the facts involved. The Council may, for the purpose of making such findings or for other purpose in the interest of justice, take additional evidence of or concerning facts material to the questions involved, or may, for such purpose, appoint a committee of its members or any notary public to act as referees or referee for the taking of such additional evidence.

Such referee or referees shall render a report in writing to the Council, which report shall contain a clear statement of the facts found by the referee or referees from the testimony or evidence adduced.

The Council may affirm, reverse or modify the decision of the Board of Directors or make such other disposition of the proceedings as it may deem proper.

In every case of an appeal the individual councilors and the Council, through a committee thereof, prior to any hearing being held upon the appeal, shall exert all proper efforts at conciliation and compromise.

This Association may be represented by its attorney to advise the Council upon procedural questions only.

The decision of the Council shall be final and bind the appellant member and the component county society.

Section 6.—Registration at Annual Sessions Necessary for Participation Therein

Each member in attendance at the Annual Session shall register, after his right to membership has been verified by reference to the records of this Association. No member shall take part in any of the proceedings of the Annual Session until he has complied with the provisions of this section of the By-Laws.

Section 7.—Component County Society Secretaries to Furnish Data on Applications for Membership

The secretary of each component county society, on forms or blanks supplied by this Association for that purpose, shall notify the Secretary-Treasurer of this Association in writing, as soon as possible, of each application for membership in such component county society, with the name, address, and all other particulars regarding the applicant known to the secretary of such component county society.

Section 8.—Component County Society Membership

(a) Lists to Be Sent to Secretary-Treasurer

It shall be the duty of the secretary of each component county society to furnish the Secretary-Treasurer before the first day of March of each year a list of names and addresses of all members in good standing on the first day of January of each year, and to notify in writing the Secretary-Treasurer of this Association monthly of all changes in membership of the component county society, with corresponding changes of address.

(b) Residence Period Required

No doctor of medicine, otherwise qualified for membership in this Association, shall be elected to membership in a component county society, unless he shall have actually established his residence in the county at least six months prior to the date upon which his application for such membership is acted upon; provided, however, that this time requirement as to residence shall not apply to applicants who seek admission to a component county society by proper transfer credentials from some other component county society of this Association.

Section 9.—(a) Membership Where No Component County Society Exists

Any doctor of medicine residing in a county in which there is no component county society may make application for membership in the component county society most convenient to the county in which he resides, and if otherwise qualified may be elected to membership therein.

(b) Membership in Society of County Other Than That of Residence

Any doctor of medicine living on or near a county line shall be eligible and may apply for and be elected to membership in that component county society most convenient for him to attend, provided that the consent of the component county society of the county in which the doctor resides be first obtained.

(c) Membership Where Major Office and Residence Are in Different Counties

A doctor of medicine, who has his major office for professional practice in one county and resides in another county, has the option of applying for membership in the component county society of either county, provided that both component county societies sanction such action.

Section 10.—Membership as Affected by Transfer of Residence

A member who changes his residence from the county through whose component county society he holds membership in this Association, to another county in which there is a component county society. is eligible to membership in the component county society of his new residence on the presentation of a transfer card, and satisfactory evidence that his dues have been paid in full in the component county society in which he holds membership; provided, however, that no evidence which would disqualify him for membership exists.

He shall forfeit his membership in this Association one year after such change of residence unless he makes proper application for membership in the society of the county to which he has moved.

Any member who has heretofore changed his residence as aforesaid shall have one year after the date of adoption hereof to comply with the provisions of this section.

If a member who so transfers his residence be not elected to membership in the society of the county into which he has moved, he shall have the right to maintain his membership through payment of dues in the society of the county of his former residence if that component county society gives its sanction thereto.

Section 11.—Transfer Cards

When a member in good standing in a component county society moves to another county or other jurisdiction in this State he shall, on request, be given a transfer card, without cost. He must assume such financial obligations as shall be deemed proper by the component county society to which he is transferred, and to which he makes application for membership by transfer.

CHAPTER III.—HOUSE OF DELEGATES

Section 1.—Component County Society Secretaries to Furnish Lists of Delegates and Alternates

The secretary of each component county society in the month of January and in no event later than fifteen days prior to the annual session of the House of Delegates, on form blanks sent in January to each component county society by the Secretary-Treasurer of this Association, shall forward to the Secretary-Treasurer of this Association the names and addresses of the delegates and alternates elected by the component county society to the House of Delegates, and certify to the Secretary-Treasurer of this Association the date of such election and the term for which each delegate and alternate is elected.

Failure to forward said names and addresses within said time to the Secretary-Treasurer shall disqualify said delegates and alternates for said session, unless the Council, for good cause, shall excuse such default. such action of the Council, however, being subject to the approval of the House of Delegates.

Section 2.—Reseating of Delegate in Lieu of Alternate

When an alternate is seated, the Secretary-Treasurer shall record him as having been seated for a specific delegate who is absent. If the delegate so absent later appears, he can be seated in lieu of the alternate, if the alternate announces the presence of the delegate in whose place he is serving, and the House of Delegates sanctions the retirement of the alternate as an acting delegate.

Section 3.—Rights and Duties of Alternate Delegates

The House of Delegates concurring, an alternate shall take the place and perform the duties of any delegate of the delegation from his component county society who is absent from any meeting.

Section 4.—Seating Member in Absence of Delegate and His Alternate

If a delegate be absent, and no alternate be present to take his seat, then, with the sanction of the House of Delegates, some other member of the respective component county society may be seated to fill such vacancy.

Section 5.—Delegates or Alternates Absent from Session Disqualified

Any delegate absent from an annual session to which he has been duly elected, who has not notified the secretary of his component county society at least fifteen days before the convening of said session of his inability to attend, shall be ineligable for re-election as a delegate for the next two years succeeding the expiration of his term of office; provided that nonattendance without such notice may be excused for good cause by the Committee on Credentials.

Secretaries of component county societies shall in writing notify delegates and alternates of their election, and in so doing shall call their attention to the provisions of this by-law.

Section 6.—(a) Appointment of Committee on Credentials and Two Reference Committees

Prior to or at the beginning of an annual session the Speaker of the House of Delegates shall appoint from the members thereof the following committees:

(1) A Committee on Credentials.

(2) A Reference Committee on Reports of Officers and of Standing Committees.

(3) A Reference Committee on Resolutions and on New and Miscellaneous Business.

(b) Membership of Credentials and Reference Committees

Each of the aforesaid committees shall consist of three members, the chairman of each to be designated by the Speaker.

The Speaker, the House concurring, shall refer to these committees such matters as are deemed proper.

The Reference Committees shall present written reports dealing with and making recommendations on all matters submitted to them. The report of each committee shall be read by its chairman first as a whole, and the House of Delegates shall then act and vote upon the report as a whole or section by section, as it may deem best.

(c) Special Committees of House of Delegates

The Speaker, the House of Delegates concurring, shall have the right to appoint special committees for special work. All committees of the House of Delegates shall present their reports to the House of Delegates in writing.

(d) Duties of Credentials Committee

The Secretary of the Association shall supply the Committee on Credentials with the necessary information concerning the membership of the House of Delegates.

The Secretary shall give this committee a list of component county societies, showing the total membership as of November 1 of the preceding year. This committee shall ask each delegate and alternate to present his written credentials, but shall accept the official written list submitted by the secretary of any component county society; provided that such written list be sent to the Secretary of the Association at least fifteen days before the beginning of the annual session.

The committee shall make a written report to the House of Delegates of the delegates and alternates entitled to membership therein.

Section 7.—Delegates to the American Medical Association

The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that organization.

Section 8.—Special Committees Appointed by the House of Delegates

The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who may or may not be members of the House of Delegates. Such committees shall report in writing to the House of Delegates; and the members, the House concurring, may participate in the debate on their reports.

Section 9.—Approval of Memorials

The House of Delegates shall approve all memorials and resolutions issued in the name of the Association during an annual session before they shall become effective.

CHAPTER IV.—COUNCIL

Section 1.—Duties of District Councilors

Each District Councilor shall be organizer, peacemaker and censor for his district.

(a) Visitation of Component County Societies; and Report Thereon

He shall visit each county in his district at least once a year for the purpose of organizing component county societies where none exist, of inquiring into the condition of the profession, and of maintaining touch with the activities of the component county societies of his district. He shall in writing make an annual report of this work and of the condition of the profession of each county in his district to the Council, which shall take such action thereon as it may deem best.

(b) Traveling Expenses

The necessary traveling expenses incurred by any Councilor or officer of this Association in performing any duties imposed under the provisions of this Constitution or these By-Laws may be allowed and paid on proper itemized statement, subject to such limitations as the Council may deem wise to adopt; but this shall not be construed to include any expenses incident to attending the Annual Session of the Association.

Section 2.—Mail Ballot

The Chairman of the Council, at any time, may direct the Secretary to submit any urgent matter or question to the members of the Council by mail ballot, the question or proposition being prepared through conference of the Secretary with the Chairman of the Council and the Chairman of the Executive Committee; and the vote of two-thirds of the members upon such question by mail or telegraph shall be binding upon the Council.

Section 3.—Registry

The Secretary-Treasurer, in writing, shall request each Councilor to register his address where he desires all notices to be sent to him by mail or telegram.

Section 4.—Order of Business

At meetings of the Council, business shall be transacted as the Council may determine from time to time by resolution.

The Council shall provide and fix the order of business of the first two meetings of the House of Delegates at each regular annual session, provided that the House of Delegates may change the order of business by a majority vote.[10]

Section 5.—Preparation of Budget—Annual Assessment

The Auditing Committee, prior to December 1 of any year, shall submit to the Executive Committee, for consideration at its December meeting, a budget under which the Association shall work in the fiscal year following the next annual session.

The Executive Committee, after consideration of the Auditing Committee's proposed budget, shall submit the same to the Council, prior to the spring meeting of the Council, with a report of its own containing suggested changes, additions, or comments.

The Council in turn shall consider the two proposed budgets so submitted, and shall then make a final draft of a proposed budget for the Association, to be submitted to the House of Delegates at the next annual session.

The Council shall recommend to the House of Delegates the amount of the annual dues or assessments of each member of the Association.

Section 6.—Committee of Arrangements for Annual Meeting

(a) Appointment and Duties

The Chairman of the Council, subject to the approval of the Council, shall, at least six months before the regular annual session, appoint a Committee on Arrangements for the annual session, one member thereof being designated as the general chairman. This committee shall consist of five members, at least three of whom shall be members of the component county society of the county in which the annual session is to be held.

The Secretary-Treasurer of the Association shall be ex-officio a member of this committee.

This committee shall have charge of all local arrangements not otherwise provided for.

The terms of office of members of this committee shall expire when the succeeding committee of arrangements is appointed.

As the local Committee of Arrangements this committee shall provide suitable meeting places and shall have general charge of all local arrangements. The committee shall have power to appoint local advisory members and subcommittees to aid in its work.

(b) Commercial Exhibit

The Council shall decide what portion of the income from commercial exhibits or other convention services shall go to the local Committee of Arrangements. The location and rules for the commercial exhibits and other accessory annual session activities shall be subject to the approval of the Council.

(c) Local Convention Expenses

The Council shall decide what portion of the local expenses shall be borne by the Association.

(d) Report of Committee of Arrangements

The Committee of Arrangements shall, as soon as possible and not later than two months after the adjournment of the final meeting of the regular annual session, make and file with the Secretary-Treasurer of the Association an itemized, detailed report of all of its receipts and disbursements, and shall remit any moneys due the Association remaining in its possession, to the Secretary-Treasurer.

Section 7.—Offices

The Council shall provide and secure such offices for the Association as may be required to conduct its activities and business properly.

Section 8.—Executive or Field Secretaries or Representatives

The Council may employ one or more Executive or Field Secretaries or Representatives, who need not be physicians nor members of the Association. The duties of such a representative or representatives, if appointed, shall be determined by the Council by resolution.

Section 9.—Legal Counsel

The Council at its annual organization meeting shall appoint one or more legal advisors, giving each such title as may be deemed proper. It shall fix the amount of retainer and other fees. By resolution it shall indicate what duties shall be assigned to each advisor. The Council shall appoint such attorneys-at-law licensed in California at its annual organization meeting.

The Council shall have the right to request the attendance of Counsel of the Association at any meetings at which it might desire his presence and advice, and at such meetings he shall call the attention of the Council to matters in which the legal aspects may be of importance, and shall give such other opinions in special matters as may be requested of him by the Council.

The General Counsel shall present in writing as promptly as the same may be properly prepared, such legal opinions as may be requested by the House of Delegates, the Council or the Executive Committee.

CHAPTER V.—COMMITTEES

Section 1.—Standing Committees

The standing committees of this Association shall be as follows:

(a) A Committee on Scientific Work.
(b) A Committee on Public Policy and Legislation.
(c) A Committee on Publications.
(d) A Committee on Medical Defense.
(e) A Committee on Medical Education and Medical Institutions.
(f) A Committee on Hospitals, Dispensaries, and Clinics.
(g) A Committee on Medical Economics.
(h) A Committee on Health and Public Instruction.
(i) A Committee on Associated Societies and Technical Groups.
(j) A Committee on History and Obituaries.
(k) A Committee on Membership and Organization.
(l) A Committee on Industrial Practice.
(m) A Committee on Post-Graduate Activities.[11]
(n) A Committee on Public Relations.[12]

Section 2.—Standing Committees; How Elected; Terms of Office

Unless otherwise provided in these By-Laws, each of these committees shall consist of three members, each of whom shall serve for a term of three years. One member of each of these committees shall be nominated and elected annually by the Council, by and with the approval of the House of Delegates, provided that at the annual session at which this Constitution is adopted, one member of each of the foregoing committees shall be elected for a term of three years, one member for two years, and one member for one year, their successors to be elected in proper and regular annual sequence thereafter.

Section 3.—Report Procedure for All Committees

Regular standing and special committees of the Association may make investigations and surveys on authorization of the Council or House of Delegates, but all recommendations and reports of all committees (unless expressly otherwise provided in the Constitution or By-Laws) must be submitted only to the Council or House of Delegates. Other than as herein stated no committee is authorized to act for or represent this Association.

Section 4.—Advisory Groups to Standing Committees

To aid it in its work, each committee, if it so desires, shall have the power to appoint an Advisory Group to its committee, consisting of from two to ten members. Such advisory members, if present at a regular committee meeting, shall not have the right to vote.

Section 5.—Officers of Standing Committees[13]

The chairman of each of these committees, except the Committee on Public Relations, shall be nominated and elected annually by the Council, by and with the approval of the House of Delegates. The chairman of the Committee on Public Relations shall be elected by said committee, subject to the approval and confirmation of the Council, and in the event of a failure to elect within sixty days after adjournment of the annual session the Council shall elect said chairman. Each of these committees shall, each year, except as otherwise provided in these by-laws, at its first meeting or official consultation, during or following the annual session, elect its own secretary.

Section 6.—Secretary-Treasurer's Notice to Standing Committees

The Secretary-Treasurer of the Association, within one month after the annual session, shall write the Committee Chairman of the preceding year, to call a meeting for organization and consideration of any business. The Secretary shall also send a copy of this letter to each of the other members of the committee.

Section 7.—Annual Reports of Standing Committees

At least sixty days prior to the annual session, each of these committees shall submit a written report to the Council on its work during the preceding year, the same to be printed in the Pre-convention Bulletin as otherwise provided.

Section 8.—Committee on Scientific Work

The Committee on Scientific Work shall consist of the Secretary-Treasurer, the secretaries of the sections on general surgery and general medicine and three other members to be elected by the Council, each of these three members to serve three years, one member being elected each year. The Secretary-Treasurer shall be chairman.

This committee shall determine the character and scope of the scientific proceedings of the Association for each session, and shall invite the guest speakers,[14] subject to the instructions of the Council.

At least thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers and discussions shall be presented.

This committee shall have one joint session with the section secretaries, at a time and place to be designated by the Chairman of the Committee, at least forty-five days prior to the annual session, to coördinate more efficiently the various activities of the Association at its annual session. The chairman of the local committee of arrangements shall be invited to attend this meeting.

Section 9.—Committee on Public Policy and Legislation

The Committee on Public Policy and Legislation shall consist of three elected members, and ex-officio, the President and the President-Elect.

The chairman of the committee, and in his absence, the President, shall act as chairman at the joint meetings of this central state group and of auxiliary county groups.

(a) Functions of the Committee

The Committee on Public Policy and Legislation and its auxiliary county groups shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine, subject, however, to the approval of the Council.

(b) County Auxiliary Committees on Public Policy and Legislation

Each component county society shall appoint or elect three of its members as members of its auxiliary Committee on Public Policy and Legislation, designating one member as chairman; and the component county society secretary shall send promptly the names and addresses to the Secretary of this Association.

(c) Work of Auxiliary County Committees

The Committee on Public Policy and Legislation of this Association, with the sanction of the Council, shall formulate the duties of these county auxiliary committees and supply each member with a copy of its suggestions and instructions. The auxiliary committeemen shall be accountable to their component county societies and to the Council of this Association for prompt and continued coöperation with the Committee on Public Policy and Legislation of this Association.

Section 10.—Committee on Publications

The Committee on Publications shall consist of three elected members, and ex-officio the Editor, the Associate Editor or Editors, and the Secretary-Treasurer.

The committee, subject to the instructions and approval of the Council, shall have authority to arrange for the publication and distribution of the Official Journal of the Association and such other publications as the Council or the House of Delegates may direct[15]; and shall consult with the Editors, and with the secretaries of the component county societies to the end that the scientific and organization work of the Association may be presented to the members of the Association in the best possible manner.

Section 11.—Committee on Medical Defense

The Committee on Medical Defense, subject to the approval of the Council, shall prepare plans and establish rules for the protection of the legal rights of members of this Association against whom suits for alleged negligence have been threatened or brought.

It may assist in the defense of any member sued for alleged negligence if the member was in good standing and had complied with the rules of the Council when the service on account of which suit was threatened or brought was rendered—provided that the committee determines that the position of the member merits such action.

Section 12.—Committee on Medical Education and Medical Institutions

The Committee on Medical Education and Medical Institutions shall serve in this state for the Council on Medical Education of the American Medical Association.

It shall keep in touch with the problems pertaining to medical education and to medical and other institutions of training for medicine and the healing art.

Section 13.—Committee on Hospitals, Dispensaries and Clinics

The Committee on Hospitals, Dispensaries and Clinics shall serve in this state for the Council on Hospitals of the American Medical Association.

It shall keep in touch with the problems arising in the fields of work of all types of hospitals, dispensaries and clinics, giving special attention to those activities that are, or tend to become, a menace to the best interests of scientific medicine and of the profession and its members.

Section 14.—Committee on Medical Economics

The Committee on Medical Economics shall investigate matters affecting the economic status of doctors of medicine.

Section 15.—Committee on Health and Public Instruction

The Committee on Health and Public Instruction shall keep in touch with and investigate matters concerned with the public health of the state and shall carry on such activities in the field of public health, and aid in the dissemination of information in relation thereto, as the Council may direct.

Section 16.—Committee on Associated Societies and Technical Groups

The Committee on Associated Societies and Technical Groups, subject to the instructions of the Council, shall endeavor to create proper liaisons between this Association and other state and national medical organizations, as well as with the organizations of related professions, such as dentistry, pharmacy and nursing. It shall also endeavor to bring about a proper understanding with non-medical organizations or groups of technicians and others whose work has a bearing on or is related to the practice of medicine.

Section 17.—Committee on History and Obituaries

The Committee on History and Obituaries shall compile and prepare for the archives and for the publications of the society suitable articles on the history of the Association and statements concerning deceased members. The Editor and the Secretary shall be members of this committee, ex-officio.

Section 18.—Committee on Membership and Organization

The Committee on Membership and Organization, of which the Secretary-Treasurer shall be a member ex-officio, shall each year make a survey of the number of licensed doctors of medicine in the state and shall seek to have the component county societies bring into membership all eligible doctors of medicine in their respective counties; and to that end in the spring of each year, and perhaps oftener, shall send to each component county society a letter, a copy being sent also to each component county society president and secretary, urging each component county society to have a committee on membership appointed for the purpose of making a survey and bringing into affiliation all eligible doctors of medicine.

Section 19.—Committee on Industrial Practice

The Committee on Industrial Practice shall keep in touch with matters and problems peculiarly connected with industrial practice.

Section 20.—Committee on Postgraduate Activities[16]

The Committee on Postgraduate Activities, of which the secretary-treasurer shall be an ex-officio member, shall use its best efforts to promote the postgraduate and clinical courses and instruction among the component county units of the Association.

The supervision of such postgraduate and clinical courses and instruction shall be carried on through the central offices of the Association, the Council being empowered to defray travel expenses of guest speakers and other costs incident to such work to such amount as in the judgment of the Council may be deemed proper. In the development of such postgraduate and clinical courses and instruction, it is stipulated that the component county societies, through their constituted representatives, shall coöperate with the Standing Committee on Postgraduate Activities and shall also arrange to bear a proper proportion of the expense thereof of such amount as may be mutually agreed upon.

(a) Committee on Public Relations[17]

The Committee on Public Relations shall comprise the chairmen of the following committees, viz.: The Committee on Public Policy and Legislation; the Committee on Medical Economics; the Committee on Hospitals, Dispensaries and Clinics; the Committee on Health and Public Instruction; the Committee on Membership and Organization; the Committee on Industrial Practice, and the Cancer Commission; the Committee on Postgraduate Activities; and the President, the President-Elect, and the Secretary.

The Committee shall be responsible to the Council and the House of Delegates for all of its activities.

The Council or the Executive Committee may instruct the Committee on Public Relations, and outline to it certain policies and duties which shall be executed through the Director of Public Relations. In the event of any disagreement between the Committee and the Council or the Executive Committee as to any activity or policy, the decision of the Council, after full discussion and hearing, shall be final.

The Committee shall make recommendations to the Council for approval as to the time, the place, the number of meetings and the budget of the Department of Public Relations, provided that the Secretary shall call the first meeting of the Committee within thirty (30) days following the annual meeting of the Association.

The Director of Public Relations shall be appointed by the Council (after consultation with the Committee on Public Relations) annually at the organization meeting of the Council. He shall serve at the pleasure of the Council and the Committee. He shall act under the supervision and instruction of the chairman of the Committee in such matters as shall be approved and sanctioned by the Committee, and be responsible to the Committee.

The Council shall arrange with the general counsel to give the Committee all legal aid.

The Committee shall annually at its first meeting elect its own chairman, subject to the approval and confirmation of the Council. The secretary of the Association shall be ex-officio secretary. A majority of the Committee shall constitute a quorum.

(b) Department of Public Relations

The Department of Public Relations shall consist of the following component standing and special committees of the Association, viz.: The Committee on Public Policy and Legislation; the Committee on Medical Economics; the Committee on Hospitals, Dispensaries and Clinics; the Committee on Health and Public Instruction; the Committee on Membership and Organization; the Committee on Industrial Practice; the Committee on Postgraduate Activities[18]; and the Cancer Commission.

Section 21.—Publication of Committee Reports in Pre-Convention Bulletin

Reports of the standing and special committees, as approved, deleted or modified by the Council, shall be published in a pre-convention bulletin or in the official journal of the month preceding the date of the annual session of the Association. Such reports must be in the hands of the Secretary-Treasurer at least sixty days in advance of the annual session.

If a committee fails to send in its report in proper time, the name of the committee and the names of its members shall be printed as above indicated, with a statement that the committee failed to send in its report, and the Council, subject to the approval of the House of Delegates, shall be empowered under such conditions to make such changes in the personnel of the committee as in its judgment may be deemed best.

Section 22.—Additional Committees

The House of Delegates and the Council are authorized and empowered to appoint special committees, with special instructions as to work to be undertaken, whenever it is deemed necessary or desirable by either body.

CHAPTER VI.—POWERS AND DUTIES OF OFFICERS

Section 1.—Duties of the President

The President shall preside at all meetings of the Association.

He shall appoint all committees not otherwise provided for; he shall deliver an address at the annual session at such time as may be arranged, and shall perform such other duties as custom and parliamentary usage may require, or as the House of Delegates or the Council may direct.

He shall be the real head of the profession of the state during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the state and assist the Councilors in building up the component county societies, and in making their work more practical and useful. The Council shall decide what portion of the expenses incurred on his official visits shall be paid by the Association.

He shall be ex-officio a member of all committees of the Association.

Section 2.—Vacancy in Offices of President and President-Elect; How Filled

In case of vacancy in the offices of both President and President-Elect, the chairman of the Council shall act as the Acting President until a President is elected at the next annual session of the House of Delegates.

Section 3.—Duties of the Secretary-Treasurer

(a) Minutes

The Secretary-Treasurer (who may also be referred to as Secretary or Treasurer) shall attend the General Meetings of the Association, the meetings of the House of Delegates, of the Council and of the Executive Committee, and shall keep minutes of their respective proceedings in separate record books.

(b) Custodian of Records

He shall be custodian of all record books and papers belonging to the Association. He shall have the custody of the seal of the Association.

(c) Contracts

He shall countersign all contracts, agreements, conveyances, transfers or other instruments to which the Association is a party, the execution of which has been authorized by the House of Delegates or Council.

(d) Checks

The Secretary-Treasurer shall sign and issue checks or drafts only upon vouchers approved and signed by at least two of the members of the Auditing Committee or as otherwise provided.

(e) Advertisements in Association Publications

The Secretary-Treasurer, subject to instructions by the Council, shall carefully examine, approve, modify or reject all material for advertising in any of the publications of the Association, and shall, in all cases of doubt, refer such proposed advertisements to the Executive Committee or the Council for decision. He shall, with the approval of the Council or the Executive Committee, execute, for the Association, written contracts relating to advertising in the form approved by the Council, subject to instructions by the Council.

(f) Registrar at Annual Sessions

He shall provide for the registration of the members and delegates at the Annual Session.

(g) Index Register of California Medical Licentiates

He shall, with the coöperation of the secretaries of the component county societies, keep a card-index register of all the licensed practitioners of the state by counties, noting the status of each in relation to his component county society; and shall transmit a copy of this list to the American Medical Association, transmitting to its secretary each month a report containing the names of new members and the names of those dropped from the membership roster during the preceding month.

(h) Register of Component County Societies, Their Members and Officers

He shall keep a register of all component county societies, their respective officers, and of all members of the Association, with their addresses, and shall compile an annual directory of the same. He shall print in the January or February issue of the official journal the number of active members of each component county society as of November 1st of the preceding year.

(i) Notices

He shall give all notices required by the Constitution and By-Laws of this Association, or by order of the Council, or of the Executive Committee, or by law.

(j) Correspondence and Notifications to Committees

He shall conduct the official correspondence, promptly notifying members of meetings, officers of their election, and committees of their appointment and duties, as outlined in the motions creating such committees. Such notifications shall be made in writing.

(k) Assistants

He shall employ and dispense with such assistants as may be ordered by the Council. The Council by resolution may outline the scope and duties of special employees acting under the Secretary-Treasurer.

(1) Annual and Other Report Forms

He shall supply all component county societies with the necessary forms for making their annual and other reports to this Association.

(m) Salary

The amount of his salary shall be fixed by the Council.

(n) Bond

He shall give bond in such sum as may be fixed by the Council. The Association shall pay the premium on the said bond.

(o) Duties as Treasurer

He shall as Treasurer demand and receive all funds due the Association, together with bequests and donations, and shall promptly deposit the same in one of the depositaries thereof; and shall keep a proper and accurate record thereof, as well as of all funds disbursed by the Association.

(p) Audits and Reports

He shall subject his accounts to such examination or audit as the House of Delegates or Council may order.

He shall annually render an account of his work, and of the state of the funds in his hands, and make a report on the same and of his work as Secretary-Treasurer to the House of Delegates. He shall in writing also make such other reports as the House of Delegates or Council may request.

(q) Disbursement of Association Moneys

He shall pay out the money of the Association only upon a check or draft as otherwise provided herein.

(r) Other Duties

He shall perform such other duties as the Council or Executive Committee may direct.

Section 4.—Duties and Powers of the Chairman of the Council

The Chairman of the Council shall preside at all meetings of the Council. He shall sign all contracts and agreements, conveyances, transfers or other instruments (other than advertising contracts) to which the Association is a party, the execution of which has been authorized by the House of Delegates or the Council. He shall sign all checks or drafts for the disbursement of funds of the Association. He shall, on behalf of the Council, deliver its annual report to the House of Delegates. He shall perform such other duties as may be imposed upon him by the Constitution or these By-Laws.

Section 5.—Duties of Vice-Chairman of the Council

The Vice-Chairman of the Council, in the absence or inability of the Chairman to act, shall be vested with all the powers and shall perform all the duties of the Chairman.

Section 6.—Duties and Powers of the Speaker

The Speaker of the House of Delegates shall preside at its meetings and shall perform such other duties as parliamentary usage may require. He shall appoint all committees authorized by the House of Delegates, unless otherwise provided.

He shall be ex-officio a member of the Council.

Section 7.—Duties of Vice-Speaker

The Vice-Speaker shall act as Speaker in the absence of or at the request of the Speaker. The Vice-Speaker shall not have ex-officio membership in the Council.

Section 8.—Duties of the Editor

The Editor and Associate Editor or Editors shall compile, edit and have charge of the official journal of the Association and such other publications as the Council or the House of Delegates may instruct him to undertake.[19]

CHAPTER VII.—SESSIONS AND MEETINGS

Section 1.—Addresses at Annual Session

At the General Meetings, at such times as may have been arranged, shall be delivered the annual address of the President and, with the sanction of the Council, such other addresses and reports as may be deemed desirable.

Section 2.—Time Length of Papers

No address or paper, except that of the President, and such other addresses and reports as may be deemed desirable by the Council, shall occupy more than twenty minutes in delivery.

Section 3.—Time Length of Discussions

No member, except by unanimous consent, shall speak more than once in the discussion of any paper nor longer than five minutes at any one time.

This by-law shall be printed on all programs of general and section meetings.

Section 4.—Scientific Papers Property of Association

All papers read before this Association shall be its property.

Each paper, when it has been read, shall be deposited with the secretary of the section, by him to be promptly turned over to the Secretary of the Association.

Section 5.—Scientific Papers Not to Be Published Elsewhere

Authors of papers read before this Association shall not cause them to be published elsewhere except with the consent of the Committee on Publications.

Section 6.—All Meetings of Same Session Shall Be in Same Locality

The general meetings of the Association, the meetings of the House of Delegates, and the meetings of the Scientific Assembly and its sections at any session shall be held in the State of California at the same locality and in buildings as convenient of access, one to the other, as may be possible.

CHAPTER VIII.—ELECTION OF OFFICERS

Section 1.—Time of Election of Officers

The election of officers shall be held at the second meeting of the House of Delegates, at the regular annual session thereof.

Section 2.—Election by Ballot; Number of Votes Necessary

All elections of officers shall be by ballot; provided, that by a two-thirds vote of the members present and acting election by ballot may be waived.

A majority of the votes cast shall be necessary to elect any officer, except delegates and alternates to the American Medical Association.

In case no nominee receives a majority of the votes on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Section 3.—Election of Delegates and Alternates to A. M. A.

In case no nominee for delegate or alternate to the House of Delegates of the American Medical Association receives a majority of the votes cast on the first ballot, the nominee receiving the highest number of votes cast shall be declared elected. In case of a tie vote, the tie shall be determined by lot. A separate election shall be held to fill each vacancy, and an alternate shall be specifically elected for each delegate.

CHAPTER IX.—SCIENTIFIC SECTIONS

Section 1.—(a) Division of Scientific Work

The scientific work of the Association shall be divided into twelve scientific sections, as follows: General Medicine; General Surgery; Pediatrics; Eye, Ear, Nose and Throat; Urology; Anesthesiology; Obstetrics and Gynecology; Radiology; Industrial Medicine and Surgery; Pathology and Bacteriology; Dermatology and Syphilology, and Neuropsychiatry.

(b) Additional Scientific Sections; How Authorized

Additional scientific sections or regrouping of existing scientific sections can through proper resolution be authorized by the House of Delegates.

(c) Rules of Procedure of Scientific Sections

Each scientific section shall adopt rules of procedure for its own better government and work. Its officers shall be responsible for the proper keeping of records of scientific and business meetings.

(d) Officers of Sections

The members of each section shall at the regular annual session of the Association elect a chairman and a secretary of the section to serve for the term of one year.

(e) Program

Each of the sections shall present a scientific program at the annual session of the Association, and its officers shall be responsible for the proper preparation of the same, and for the proper coöperation with other scientific sections during the annual meeting.

CHAPTER X.—FUNDS, PROPERTY AND ASSESSMENTS

Section 1.—Annual Dues and Assessments

(a) When Payable

The annual assessment or dues shall be payable on or before January 1 of the year for which they are levied.

(b) County Secretaries to Collect Dues

The secretary of each component county society shall cause to be collected and shall forward to the office of the Association the dues and assessments for its members.

(c) Record of Fact of Payment of Dues

The record of payment of dues and assessments on file in the office of the Association shall be final as to the fact of payment by a member and as to his right to participate in the business and proceedings of the Association and of the House of Delegates.

Section 2.—Bequests, Legacies, Donations and Gifts

The Association may receive through the Council or for the benefit of the Association through any corporation which may be formed pursuant to Article XIII of the Constitution, such bequests, legacies, donations and gifts as the Council shall deem it proper and suitable to accept.

Section 3.—Funds and Moneys—Deposit and Withdrawal

All funds and moneys of the Association by whomsoever received shall be promptly forwarded to the Secretary-Treasurer of the Association and deposited by him in a depositary of the Association.

No demands or claims against the Association shall be paid and no funds or moneys of the Association withdrawn from any depositary thereof except upon written voucher approved by the signature of at least two members of the Auditing Committee or by a majority vote or written approval of a majority of all the members of the Executive Committee on check or draft signed by any two of the following: The Chairman of the Council; the Vice-Chairman of the Council (only in the absence of the Chairman); Chairman of the Auditing Committee; the Secretary-Treasurer.

Section 4.—Revolving Fund

A revolving fund in such amount as may from time to time be fixed by the Council shall be deposited with the Secretary-Treasurer from which fund immediate cash demands may be paid.

Section 5.—Surplus Funds from Journal and Publications

On authorization therefor by the House of Delegates or the Council, any surplus funds arising from the operation of the official journal or other publications of the Association may be applied and used for any purposes deemed suitable or may be delivered and paid over to any corporation which may be formed pursuant to Article XIII of the Constitution.

CHAPTER XI.—MISCELLANEOUS

Section 1.—Ethics

The principles of medical ethics as promulgated from time to time by the American Medical Association and by the California Medical Association are and shall be the principles of medical ethics of this Association and the component county societies thereof, and shall regulate and govern all members thereof.

Interpretation of ethics about which any controversy may arise or exist shall be submitted to the Council of this Association, and its interpretation and ruling thereon shall be final.

Section 2.—Rules of Order

In the absence of any provision in the Constitution or these By-Laws, all meetings of the Association, of the House of Delegates, of the Council, and of committees shall be governed by the parliamentary rules and usages contained in the current edition of Roberts' "Rules of Order."

CHAPTER XII.—AMENDMENTS *

Section 1.—Amendments—Vote and Procedure

These By-Laws may be amended by the House of Delegates at any meeting of any session thereof by the affirmative vote of at least two-thirds of the qualified members thereof present and acting; provided, that any proposed amendment has been submitted in writing to the House of Delegates at least twenty-four hours previous to being voted upon.

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* See page 200 for key number references to amendments included in this "Second Printing Revision."

CHAPTER XIII.—CORPORATIONS[20]

To further aid in carrying out the objects of the Association the House of Delegates, at any meeting at any regular or special session thereof, may by a two-thirds vote of the membership thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of one or more corporations under the laws of the State of California with such incorporators, name, purposes, county where the principal office for the transaction of business is to be located, first directors, the total number of shares, classes of shares, par value of any shares having par value, statement of the provisions, privileges and restrictions granted or imposed upon the respective classes of shares, or if the corporation be formed without capital stock, the authorized number and qualifications of its members, the different classes of members, if any, the property, voting and other rights of each class of members and the liability of each and all classes, to dues or assessments, and with such further provisions in the articles of incorporation thereof and with such by-laws as the Council shall prescribe, fix and determine; and the House of Delegates at any meeting of any regular or special session thereof may by a vote of two-thirds of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey or delivery or cause to be granted, assigned, transferred, conveyed or delivered to any of such corporations upon the formation thereof or to applicants for health and accident or other insurance in or from any of said corporations at or prior to the formation thereof without any consideration therefor, such funds and property, real or personal, of this Association as the House of Delegates shall from time to time authorize or ratify.

CHAPTER XIV.[21]—REPEAL OF ALL EXISTING BY-LAWS

Section 1.—Repeal of Existing By-Laws

All chapters and all sections and parts of all chapters of the existing By-Laws of this Association are hereby repealed.

KEY TO AMENDMENTS

Key numbers in the text of this edition of the Constitution and By-Laws of the California Medical Association give the references to minutes of the House of Delegates as printed in the official journal, "California and Western Medicine." Key number references follow:

1. By typographical error in first printing of Constitution and By-Laws in 1929, San Bernardino County was included as part of Councilor District No. 2.
2. 1933—Art. VII, Sec. 1, California and West. Med., June, 1933, p. 457.
3. 1933—Art. VII, Sec. 8, California and West. Med., June, 1933, p. 457.
4. 1934—Art. X, Sec. 1, California and West. Med., June, 1934, p. 437.
5. 1934—Art. X, Sec. 4, California and West. Med., June, 1934, p. 437.
6. 1934—Art. X, Sec. 15, California and West. Med., June, 1933, p. 457.
7. 1934—Art. XII, Sec. 2, California and West. Med., June, 1933, p. 457.
8. 1935—Chapter XIII, Sec. 2, California and West. Med., July, 1935, p. 59.
9. 1936—Chapter II (entire chapter), California and West. Med., July, 1936, p. 80.
10. 1932—Chapter IV, Sec. 4, California and West. Med., June, 1932, p. 422.
11. 1935—Chapter V, Sec. 1, California and West. Med., July, 1935, p. 74.
12. 1933—Chapter V, Sec. 1, California and West. Med., June, 1933, p. 463.
13. 1933—Chapter V, Sec: 5, California and West. Med., June, 1933, p. 463.
14. 1932—Chapter V, Sec. 8, California and West. Med., June, 1932, p. 422.
15. 1932—Chapter V, Sec. 10, California and West. Med., June, 1932, p. 422.
16. 1935—Chapter V, Sec. 20, California and West. Med., July, 1935, p. 74.
17. 1933—Chapter V, Sec. 20A, California and West. Med., June, 1933, p. 463.
18. 1936—Chapter V, Sec. 20B, California and West. Med., July, 1936, p. 84.
19. 1932—Chapter VI, Sec. 8, California and West. Med., June, 1932, p. 422.
20. 1934—Chapter XIII, Sec. 1, California and West. Med., July, 1934, p. 440.
21. In the first printing in 1929, the title then given was a typographical error.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

COUNTY HOSPITALS

In commenting on socio-economists, the secretary of the Kansas State Medical Society employs an odd simile. We are employing it in this comment.

I suppose a snake swallows a toad without personal animosity. One with a kindly disposition and a good imagination may even believe that he does it in a spirit of helpfulness—it surely is some protection to the swallowed batrachian—but the toad finds it a disquieting, even a terrifying experience. He just "doesn't want to." Now supervisors and farm bureaus seem bent on making a snake and toad union with the county hospital and medical services. We admit we are alarmed and opposed to such deglutition.

We are opposed because:

1. It will cause hospital and medical services to become a political football.

2. Because county hospitals will practice medicine which the law states cannot be done by organizations or corporations.

3. Because there will be no free choice of physician.

4. Because it will destroy the so essential patient-physician confidential relation.

5. Because it will make physicians public servants under lay control and dominance.

6. Because it will lower the quality of medical care.

7. Because it will cause a tremendous increase in taxes by millions of dollars.

8. Because it will eventually destroy our present methods of rendering medical care that has been the important factor in producing our present morbidity and mortality rates.

9. Because medical care is an individual service and cannot be rendered efficiently under lay and political supervision. Doctors by reason of special training are alone able to administer medical care.

10. Because it injects politics and political invasion into the sick chamber of American homes.

For these, and still many other reasons, do we oppose any and all efforts to open up the county hospitals to others than the indigent or those whom the law classifies as wards of a county. Every physician should unceasingly work to defeat this political proposal. Inform your friends and patients. Remember Mr. Siemon's address to the House of Delegates at Coronado, and learn what happened in Kern County. Proponents are spreading their arguments and misinformation. Refute these at every opportunity. The movement should be discouraged persistently.

* * *

FINGER PRINTS

The movement seeking to secure a finger print record of all persons merits endorsement and coöperation of all our members. One need but mention the following advantages:

1. Identification of unconscious patients, or those injured in accidents or catastrophies.

2. Identification of the dead who may have been so mutilated as to be unidentifiable.

3. Identification of lost children.

4. Identification of individuals suddenly bereft of sanity and mental faculties.

5. Personal identification by authorities.

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† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

These are certainly valid reasons why everyone should arrange to go to their nearest police station or to the Federal Bureau of Investigation and be finger-printed. Many have gone to unknown graves and relatives have never been able to trace them because when death overtook them in a distant place it was impossible to identify the individual. Every major disaster, fire, cyclone, wreck or earthquake has left its toll of unidentified dead or severely injured. "Everyone finger-printed" is a slogan all will do well to heed.

* * *

FORESTRY MEDICAL SERVICE

The following bulletin has been sent to members in the Forestry Service:

FORESTRY MEDICAL SERVICE
CALIFORNIA MEDICAL ASSOCIATION
450 Sutter Street
San Francisco, California

June 15, 1936.

To Members:

IMPORTANT

Several months ago the Conservation Committee of the California State Chamber of Commerce requested the California Medical Association to take over, supervise and direct the *California Forestry Medical Corps.* The California Medical Association accepted this activity. At that time the corps had as its chief medical officer a Los Angeles ostopathic physician and there were some fifty osteopaths in the corps.

In due time the Conservation Committee and the executive officer cancelled the appointment and appointed the secretary of the California Medical Association as chief medical officer. Steps were taken to enroll corps members from lists recommended by county medical societies. This work was just about completed when, on May 26, 1936, we learned that a group of osteopaths with the former chief medical officer had, on their own initiative, secured articles of incorporation and purloined the name of *"California Forestry Medical Corps."*

We also learned of other unapproved activities and that car plates and badges were being used by many Hollywood non-medical persons.

In conference with representatives of the California State Chamber of Commerce and the Forestry Departments, it was decided to reorganize the corps and change the name to FORESTRY MEDICAL SERVICE OF THE CALIFORNIA MEDICAL ASSOCIATION.

REORGANIZATION PLANS

1. Change of name.
2. Reënlistment of members.
3. Change of badge and car plates.

This is being accomplished. You will find new application blank enclosed. Also order blank for new badge and automobile plates. *Please return promptly.* As the fire season is at hand, it is extremely important that our reorganization be perfected without delay. Kindly give this your immediate attention.

Yours sincerely,
FREDERICK C. WARNSHUIS, M. D.,
Chief Medical Officer.

We have since learned that some members have enrolled in the old corps. Resignation is in order. Under date of June 10 the former chief medical officer sent out a circular letter. This and all similar communications should be ignored, as the Forestry Medical Service of the California Medical Association is the only official organization and is so recognized by the Forestry and State officials.

* * *

MINUTES OF THE MEETING OF THE COMMITTEE ON PUBLIC RELATIONS

1. **Call to Order.**—The meeting of the Committee on Public Relations was called to order by Chairman Dukes in the Sir Francis Drake Hotel in San Francisco on June 20 with the following members present: Doctors C. G. Toland, E. M. Pallette, Morton R. Gibbons, F. B. Clarke, Howard Morrow, Daniel Crosby, William W. Roblee, Mr. Hartley Peart, Chairman Dukes and Director Warnshuis.

2. **Public Health Institutes.**—The Director requested questions as to the program and itinerary for public health institutes following the closing of the San Diego Exposition.

On motion of Doctor Toland, seconded by Doctor Clarke, the director was instructed to conduct the public health institutes as long as funds are available to defray the expenses thereof. Carried.

3. **Intercoast Hospitalization Insurance Association.**—Dr. Frank A. MacDonald and Mr. R. D. Brisbane of the Intercoast Hospitalization Insurance Association were guests at the meeting. They explained the manner in which services are given to their members and asked that sanction of their association be given by the Public Relations Committee. Doctor MacDonald said that, although x-ray and clinical services are now included in their policies, they would be perfectly willing to pay the patient direct for x-ray and clinical services and they, in turn, would pay the doctor.

A general discussion ensued.

It was moved by Doctor Gibbons, seconded by Doctor Crosby that the Committee on Public Relations request the Council to hold a special meeting for the purpose of discussing the problems that confront the committee in the evaluation of insurance plans in order that a uniform policy may be determined. Carried.

4. **Public Health Lectures.**—After discussion, Chairman Dukes requested each member of the Committee on Public Relations to write a fifteen or twenty minute lecture. These lectures will then be edited by the committee and made available as material for speakers who are to appear before public health meetings.

5. **Radio Talks.**—Doctor Clarke discussed the possibility of building up a large radio audience and suggested that each county society launch a campaign and use the following methods:

(1) Advertising in local papers in the radio section, the time and title of each lecture and obtain special listing of these programs.

(2) Get various companies to sponsor a program—like milk companies—and the speaker in the course of the lecture could mention the name of the product.

(3) Enlist the support of hospitals. Have cards printed and passed out to patients.

It was moved by Doctor Crosby and seconded by Doctor Graves that Doctor Clarke send a letter to Doctor Warnshuis, the director, embodying his suggestions and the director then write to each county society enlisting their aid.

The meeting adjourned at 4 p. m.

COMPONENT COUNTY MEDICAL SOCIETIES

LASSEN-PLUMAS-MODOC COUNTY

The members of the county medical society were guests of Dr. Fred J. Davis at his home in Westwood on the evening of June 13, 1936. Visitors present were: Dr. Lewis Michelson of San Francisco, Dr. H. G. Levin of Westwood, Dr. Wilbur Batson of Greenville. The meeting was preceded by a dinner given by Mrs. Davis to the members of the society and the Woman's Auxiliary.

The scientific meeting which followed the dinner was very interesting. Doctor Michelson presented a paper on *Urology in General Medicine,* illustrated by lantern slides. Doctor Michelson has the thanks of our society for a very instructive and interesting paper. Following this the annual election of officers was held. The following officers were elected for the ensuing year: President, C. I. Burnett, Susanville; secretary, Fred J. Davis, Jr., Westwood. There being no further business, the meeting adjourned.

C. I. BURNETT, *Secretary.*

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PLACER COUNTY

The Placer County Medical Society met at the Freeman Hotel, Auburn, Saturday evening, July 11, being called to order by President Louis E. Jones. In addition to President Jones there were the following members and visitors present: Members, Doctors Russell, Atkinson, Peers, Mackay, L. B. Barnes and Briner. Visitor, Dr. Harold L. Karo, of Grass Valley.

The following physicians were elected to membership: Dr. Harold L. Karo, 128 Neal Street, Grass Valley, and Dr. Daniel L. Hirsch, Thomas Building, Grass Valley.

Correspondence from Secretary Warnshuis' office was read and the following resolution, on motion by Doctor Briner, seconded by Doctor Atkinson, was unanimously adopted:

"The procedure to be followed by this society with respect to censure, suspension or termination of membership of a member of this society shall be the procedure now or hereafter contained or provided for by the by-laws of the California Medical Association, as now existing, and as the same may hereinafter be amended. This section shall supersede any of the provisions of these by-laws in conflict therewith."

Two letters from Mr. Ben H. Read, executive secretary of the Public Health League of California, were read and appropriate action taken. Dr. J. A. Russell, of Auburn, was appointed as a Committee of One to contact the various candidates for office.

Doctor Atkinson and Doctor Briner brought up the matter of the exhibition, before the society, of motion pictures on various surgical and medical subjects. It was unanimously agreed that such motion pictures would be interesting and instructive. Dr. R. C. Atkinson was appointed associate secretary and instructed to make the necessary arrangements for presenting such motion pictures at subsequent meetings.

Under the head of Reports of Cases, Dr. Louis E. Jones reported a case of a patient who had had drainage of the left antrum in San Francisco on July 3. On July 4 he came to Roseville and, because of headache, malaise and other symptoms of toxemia, consulted Doctor Jones. July 5, on the appearance of a rash, it was determined that the patient had scarlet fever. He died July 9 of generalized septicemia. Doctor Jones believes that there might have been a relationship between the antrum opening and the development of the septicemia.

Dr. R. C. Atkinson reported a case of relapsing fever. Because of its special interest that portion of the minutes reporting this case will be given in the Case Report column in this issue.*

Adjournment.

Robert A. Peers, *Secretary.*

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SACRAMENTO COUNTY

The regular meeting of the Sacramento Society for Medical Improvement was called to order by the president, Dr. Frank MacDonald, on May 19, 1936, at the auditorium on Twenty-ninth and L streets.

The minutes of the last meeting were read and approved. There were no case reports. Eighty members and guests were present.

Dr. Robert A. Peers of Colfax, president of the California Medical Association, gave a brief résumé of his work as president for the past year and stated that he had visited each of the forty county societies in the state during his term of office. He spoke most warmly of the coöperation and enthusiasm of the officers and members of the component societies who helped to make these visits a success. He stressed the fact that the California Medical Association has a most democratic form of government and that its members comprise 83 per cent of the desirable practicing physicians of California. In closing, Doctor Peers stated that the members of the Association do not take the opportunity often enough to express their views on matters of common interest to their delegates and Councilors. He advised the members to read California and Western Medicine, and thus keep abreast of the problems the profession is facing in these changing times, and stated that critical skepticism is a healthy attribute for a physician to possess.

Mr. Hartley Peart, general counsel of the California Medical Association, the next speaker, cited three interesting cases affecting medical practice in California. The first relating to the corporate practice of medicine in which the District Court of Appeal reversed the decision of the Superior Court which had granted a mandamus action brought by the Pacific Employers' Insurance Company against the State Insurance Commission. The second case related to the suit brought against the supervisors of Kern County to restrain them from admitting pay patients to county hospitals. The fourth District Court of Appeal of San Bernardino County rendered a decision favorable to the California Medical Association, although it did not settle all points raised in the briefs submitted by counsel of the California Medical Association. The third case was brought to restrain nurses and hospitals from the practice of anesthesiology. This case was lost, and when appealed by the California Medical Association the Supreme Court reaffirmed the judgment in favor of hospitals and nurses. Mr. Peart stated that a new disciplinary code has been worked out by the Committee on Legislation which he hopes will be adopted as a by-law of the California Medical Association at the convention at Coronado. In closing, Mr. Peart advised the members to take a direct interest in politics, since every eighth or tenth measure introduced in the legislature affects the medical profession directly.

The third speaker of the evening, Alson R. Kilgore, M. D., president of the Northern District of the Public Health League of California, dwelt on the work and program of his organization to impress the meeting with the importance of supporting that program through membership. He stated that at the last legislative session for 1935, of seventeen bills opposed by physicians and dentists, none passed, and of fifty-two measures favored by the two professions, all but two were passed. The ultimate fate of these bills was determined in large measure by the Public Health League. The membership of the Public Health League provided concerted effective action to oppose measures inimical to the welfare of medicine and dentistry and he urged all members of the society to promote their own welfare by affiliating with the League.

Dr. Glenn F. Cushsman, secretary of the Public Health League of California, spoke briefly about the measure fostered by the supervisors of Kern County which will probably appear on the ballot this year if the necessary 186,000 signatures are obtained to qualify it. The Public Health League will do its utmost to defeat this initiative which would result in the opening of county hospitals to all citizens and incidently further the political ambitions of the supervisors.

The application of Dr. Edgar Haag for membership in the society was read for the first time. Doctors Lung Fung, Glenn E. Millar and Leslie A. Runyan were unanimously elected to membership in the society.

The report of the Board of Directors was read.

Dr. Orrin Cook spoke on the contemplated tuberculin testing of high school students in Sacramento and stated that this work would be paid for by the Sacramento Tuberculosis Association. He asked that any physician wishing to do this work communicate with him. Doctor Peers suggested that the teachers should also be included in this examination.

Dr. Bert Howard spoke on establisihng a psychopathic ward in Sacramento as an aid in limiting the admissions to state hospitals for the insane, and the following motion was passed:

"That the Sacramento Society for Medical Improvement go on record as approving such changes in the care and custody of the mentally sick as shall conform to the intent and purpose of the Lunacy Law of the State of California."

There being no further business, the meeting adjourned.

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A regular meeting of the Sacramento Society for Medical Improvement was called to order by the president, Dr. Frank A. MacDonald, in the auditorium at Twenty-ninth and L streets on June 16, 1936.

There were forty-three members present. The minutes of the last meeting were read and approved. There were no case reports.

A symposium on *Tumors of the Breast* was presented by Doctors Guttman, Rulison and Orrin Cook.

Doctor Guttman presented a *Classification of Breast Tumors* together with microphotographs of sections of breast tissue and photographs of gross specimens. He grouped breast tumors under two main heads: 1. Benign, including fibroma, papilloma and duct papilloma which represent 15 per cent of all cases. 2. Malignant, classified into carcinoma and Paget's which represent 80 per cent of breast tumors. He stated that 95 per cent of all breast tumors can be diagnosed grossly by pathologists at the operating table as to malignancy. He also stated that microscopic examinations, to be exact, must be done in serial sections for accurate diagnosis in duct papilomas.

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* See page 172 for report.

Doctor Rulison spoke on the *Treatment of Breast Malignancy*, using as a basis for his discussion the statistics of Hutchinson, a Glasgow radiologist. Hutchinson's figures indicated that when surgery alone was resorted to, the percentage of three-year cures was only 3 per cent better at the present time than in 1914. When surgery plus x-ray was used the statistics show a 16 per cent improvement in favor of the patient. X-rays alone during the first introduction of this new weapon showed a 49.4 per cent in three-year cures and 54 per cent in five-year cures. These statistics refer to early cases only. Examination of statistics of cases from the years 1922 to 1932 treated with x-ray alone show the results to be 23 per cent better than obtained by surgery plus x-ray and 40 per cent better than by surgery alone. Hutchinson's conclusions are that surgery is no longer the treatment of choice for breast malignancy. Radiations combined with surgery produce better results than surgery alone. X-ray therapy when properly employed produces results surpassing those of any other procedure. In closing the speaker said he would continue to operate on what he felt were early cases of breast malignancy but in view of Hutchinson's critical analysis more frequent use of x-rays will be resorted to in the future without surgery.

Dr. Orrin Cook opened the x-ray discussion by mentioning the value of taking x-rays of the breast tissue itself by soft tissue technique and stated this may be helpful in deciding whether the case under consideration is malignant or not. He mentioned four factors determining regression of the tumor: 1. Radiosensitivity compared to normal surrounding tissues must be great enough to permit adequate dose to be given. 2. Presence or absence of metastasis. 3. Amount of area involved. 4. Accessibility to treatment. He enumerated four processes by which the cancer cells disappear: 1. Coagulation necrosis. 2. Fragmentation of nucleus. 3. Monster-daughter cells evolved which cannot reproduce. The tumor bed has resistance built up against spread of the process. This resistance is higher if not disturbed by the knife. Better results are obtained by small doses at frequent intervals which will destroy the cancer cells during the period of mitosis when they are most vulnerable. It is well to keep in mind the possibility of radiation fibrosis of the lung.

In the discussion that followed Doctor Zimmerman advocated a modified Coutard treatment of breast tumors with an interval of two months between surgery and radiation.

Doctor Lawson mentioned the value of sterilization of the patient by x-ray if she has not yet passed the menapause and stated that there is no appreciable advantage using over 200,000 volts in treatment.

Doctor Graham quoted Portmann's statistics of many surgeons to show that x-ray plus surgery had a higher survival than surgery alone.

The application of Dr. Edgar Haag was read for the second time and he was unanimously elected to membership in the society.

It was moved, seconded and passed that the society ratify the names of Doctors G. Wilson and Frank MacDonald for choice of representatives of the society on the County Health and Welfare Board.

There being no further business, the meeting adjourned.

Norris R. Jones, *Secretary*.

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SAN BERNARDINO COUNTY

The San Bernardino County Medical Society met at the San Bernardino County Charity Hospital on Tuesday, June 2, 1936. The meeting was called to order by the president at 8:15 p. m. About thirty-five members and guests were present. The minutes of the previous meeting were read and approved.

Dr. H. M. Walton reported on the recent meeting of the House of Delegates held during the annual session of the California Medical Association in Coronado. Doctor Walton discussed the new county hospital problems which come up at the November election and urged membership in the Public Health League.

Dr. C. L. Emmons reported that the California Medical Association had decided not to act on medical protective insurance for another year, as long as policies were available with reliable companies.

Doctor Emmons moved that the society send a vote of thanks to Mr. H. P. Thoreson, who recently resigned as county SERA director, for his efforts in behalf of the medical society while in office. The motion was carried.

Doctor Clough stated that the society had shown its appreciation to Mr. Thoreson on numerous occasions in the past and that, since Mr. Thoreson had recently announced his candidacy for Congress, he felt it unwise for a non-political body such as the county medical society to do anything at this time which might be construed to mean a political endorsement, and therefore moved that the motion before the society be laid on the table. The motion was seconded, and after more discussion, passed.

There being no further business, the program of the evening was then given, as follows: *The Friedman Test in the Abnormal States of Pregnancy*, George D. Maner, M. D., Los Angeles; *The Friedman Test in the Early Diagnosis of Chorionepithelioma*, E. M. Lazard, M. D., Los Angeles. Discussion of both papers was started by Dr. Delbert Williams.

A. E. Varden, *Secretary*.

⁂

SAN MATEO COUNTY

A special meeting of the San Mateo County Medical Society was held June 24, 1936, in the staff room of Mills Memorial Hospital at 8 p. m., the secretary presiding.

Dr. Hartzell Ray, delegate to the annual meeting of the California Medical Association, presented an illuminating report of the activities carried out by the House of Delegates at the annual session in Coronado. The society gave Doctor Ray a vote of thanks for his report.

The chairman then mentioned the names of Mr. Higgins and Mr. Call, candidates for the Assembly from this district, and read part of a letter he had received from Mr. Call. From all the available information it was apparent that both candidates were well qualified and had both promised to support public health policies in the state legislature. The county society declined to support any candidate for any office feeling that in the present instance at least it was a matter of individual preference on the part of physicians.

Next, the matter of immunization of school children was brought up for discussion. The chairman expressed the feeling that immunization should be under the control of and in the hands of the private physician even in those cases where patients could not afford to pay the usual fee for these procedures. The fact was emphasized that immunization of non-indigent patients properly belongs in the hands of the family physician, and that it would be to his ultimate best interests to provide such service for those unable to pay the standard fee even where indigents could do no more than pay for the cost of materials. Doctor Murphy discussed the plan in operation in Detroit, where all such work is backed by the county medical society and performed by the individual physician. Doctor Shaghoian mentioned a special problem which exists in Daly City, where a San Francisco physician is employed by lay groups to not only immunize the school children of Daly City but also to supervise the well baby clinic. In connection with this the secretary was directed to investigate the circumstances of the case. After considerable discussion, all of which favored placing immunization in the hands of the family physician, it was decided to appoint a committee to prepare literature to be distributed to parents of school children through the schools announcing that the immunization and vaccination of school children was under the control of the county medical society and would be performed by the family physician at a set rate for those patients able to pay, with a sliding scale to provide such services for patients unable to pay the standard rate. Accordingly the chairman appointed the following Committee on Immunization and Vaccination of School Children: Doctors William Murphy, Hartzell Ray and Wade Macomber.

In connection with the proposed initiative for opening county hospitals to the public, which will be on the ballot at the November election, Dr. Otis Allen Sharpe spoke of the work being done by the Public Health League to fight this initiative and requested coöperation of county society members with the Public Health League in this matter. The chairman announced that a legislative committee consisting of Doctors Day, Benninghoven and Bridgman was working on this problem from the standpoint of the county medical society.

J. Garwood Bridgman, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (17)

Los Angeles County.—John G. Amthor, George A. Bendlage, Potter Bowman, J. Clough Frudenfeld, Frances Holmes, Tracy O. Powell, Ralph Rhind.

Monterey County.—Winton F. Swengel.

Orange County.—John P. Davis, Stella K. Davis, Chad M. Harwood, Kirtland G. Parks.

Riverside County.—James Farrage.

San Joaquin County.—Leo D. Smith.

San Mateo County.—Charles C. Gans, John P. Russel.

Tehama County.—Otho T. Wood.

In Memoriam

Fisher, Charles Albert. Died at Los Angeles, June 20, 1936, age 58. Graduate of the College of Physicians and Surgeons, Los Angeles, 1913, and licensed in California the same year. Doctor Fisher was a member of the Los Angeles County Medical Association, the California Medical Association and the American Medical Association.

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Latta, Samuel E. Died at Stockton, June 13, 1936, age 74. Graduate of Rush Medical College, Chicago, 1884. Licensed in California in 1886. Doctor Latta was a member of the San Joaquin County Medical Society, the California Medical Association, and the American Medical Association.

+

March, William Bright. Died at Burson, June 23, 1936, age 77. Graduate of the Eclectic Medical College, Cincinnati, 1884, and licensed in California the same year. Doctor March was a retired member of the San Joaquin County Medical Society, the California Medical Association, and the American Medical Association.

+

Richter, Clemens Max. Died at San Francisco, May 19, 1936, age 88. Graduate of the Universitat Leipzig Medizinische Fakultät, Saxony, Germany, 1872. Licensed in California in 1876. Doctor Richter was a retired member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

+

Rothschild, Max Landower. Died at Napa, July 11, 1936, age 65. Graduate of the Universitat Heidelberg Medizinische Fakultät, Baden, Germany. Licensed in California in 1897. Doctor Rothschild was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

THE WOMEN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION[†]

MRS. ANDREW J. THORNTON..............................President
MRS. ROBERT M. FURLONG..............................Editor and Chairman of Publicity

STATE AUXILIARY NEWS

Minutes of the Seventh Annual Meeting of the Woman's Auxiliary to the California Medical Association

Tuesday, May 26, 1936.—The first session of the seventh annual meeting of the Woman's Auxiliary to the California Medical Association convened at 9:30 a. m. in the Coronado Yacht Club, Coronado, California, Tuesday, May 26, 1936, with Mrs. Thomas J. Clark, president, presiding. The invocation was offered by Reverend Willis S. Goldsmith.

Mrs. Clark then introduced Mrs. Elliot Colby, convention chairman, who outlined the activities of the plans for the visitors.

The address of welcome was given by Mrs. Emil C. Black of San Diego County.

The response was given by Mrs. J. C. Geiger of San Francisco County.

Mrs. J. C. Condit of Alameda County gave a brief and beautiful service in memory of those members who passed away during the past year. There were nine, the record of which will appear in the "In Memoriam" book of the State Auxiliary.

Mrs. C. Kelly Canelo of Santa Clara County, the recording secretary, called the roll for the county Auxiliaries. Those present were:

	Delegates	Alternates
Alameda	7	5
Contra Costa	2	0
Fresno	5	3
Kern	3	1
Lassen-Plumas	1	0
Los Angeles	11	12
Marin	1	0
Orange	4	3
Sacramento	3	3
San Diego	5	5
San Francisco	5	5
San Joaquin	3	3
Santa Barbara	2	0
Santa Clara	5	4
Riverside	3	3

Mrs. Elliot Colby, convention chairman, gave a written report.

Mrs. C. C. Tanner of San Diego, acting as chairman for Mrs. D. E. Froehlich, chairman of Credentials and Registration, reported thirty-seven delegates, twenty-four alternates, sixteen board members, 108 members, thirteen guests.

Mrs. A. E. Anderson read the report on the Convention Rules, which were approved, as follows:

1. Delegates are requested to be in their seats five minutes before the time of opening of meeting.
2. All visitors are welcome to general sessions.
3. Accredited delegates and members of the board only have the privilege of voting.
4. Debate open to delegates, alternates, state board members, members at large.
5. No newspaper reporters are admitted to sessions.
6. Delegates must be seated by districts.
7. Alternates shall not be seated with delegates except when representing absent delegates, when the alternate must wear the badge of the delegate.

[†] As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Robert M. Furlong, chairman of the Publicity and Publications Committee, Linden Lane, San Rafael. Brief reports of county auxiliary meetings will be welcomed by Mrs. Furlong and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

8. Members must obtain the floor, giving name and name of Auxiliary, before making a motion or speaking from the floor.

9. No member of the convention shall speak in debate more than twice on the same subject, or longer than three minutes, without the consent of the assembly.

10. That all may enjoy the convention, those present are asked to refrain from whispering; pages will pass notes when necessary.

11. Members and visitors shall remain seated until the presiding officer has declared the meeting adjourned.

Mrs. Roden of San Francisco County moved these rules be accepted. Seconded by Mrs. Annis of Los Angeles County. Carried.

Mrs. Doane of Los Angeles County moved the dues remain the same as last year. Mrs. Sargent of Alameda County seconded the motion. Motion carried.

The president, Mrs. Thomas J. Clark, called the vice-president, Mrs. William Sargent, to the chair. The president then gave her message, in which she spoke of her work and her pleasure in serving in the capacity of president of the Woman's Auxiliary. Mrs. Doane moved this report be accepted with a rising vote of thanks. Seconded by Mrs. A. J. Annis of Los Angeles. Motion carried.

The president resumed her chair and called upon Mrs. David Froehlich, corresponding secretary, to make her report.

Mrs. Frank Makinson, treasurer, reported.

The auditor's report was red by the recording secretary, Mrs. C. Kelly Canelo. This showed a balance on hand as of May 18, 1936, of $647.81. Mrs. Condit of Alameda County moved this report be accepted. Seconded by Mrs. Geiger of San Francisco County. Carried.

The following standing committee chairmen reported:

Mrs. Sargent, chairman of Membership and Organization, reported the addition of five new counties, thus giving California the honor of having the highest number of newly organized counties in the national organization.

Mrs. John Barrow, chairman of Program and Health Education, reported great improvement in programs throughout the State.

Mrs. Ray Carr Green, Public Relations chairman, reported assembly districts formed in Los Angeles, Orange and Fresno Counties.

Mrs. Arthur Annis, Public Health Activities chairman, reported outstanding activities were: a Public Health Institute in Alameda County, and San Diego gave over one day for public health talks given by physicians. These talks were for the public.

Mrs. Doane submitted the report of Mrs. Elmer Belt, Editor and Publicity chairman, who was unable to be present.

Mrs. Mark Glaser, *Hygeia* chairman, reported increased subscriptions, with Contra Costa in first place with a rating of 150 per cent.

Mrs. Andrew Thornton, Finance chairman, presented the financial report and budget.

Stationery	$ 75.00
Stenographer and clerical help	125.00
Postage	60.00
Telephone and telegraph	60.00
Convention	275.00
Editor and Publicity chairman	75.00
President's traveling expenses	225.00
Organization chairmen's traveling expenses	50.00
Miscellaneous	30.00
Total	$975.00

Mrs. Percy moved these reports be accepted as a whole, with appreciation, and placed on file. Mrs. Geiger seconded the motion. Motion carried.

Secretary read the recommendations from the State board made at the pre-convention meeting:

1. The president recommended a standing rule be made whereby funds of a sufficient amount be provided to cover the expenses of a round trip ticket to the national convention for the year corresponding to her year of office.

2. If the cash on hand at the end of the year exceeds $500 the surplus above this be placed in a savings fund which may not be drawn upon except for special purposes recommended by the vote of the State Board.

Mrs. Colby, convention chairman; Mrs. Mark Glaser, Mrs. A. J. Annis and Mrs. J. V. Barrow presented recommendations which were unanimously adopted. (Copy attached to the minutes.)

The president then made some announcements.

Appointed on Resolutions Committee are: Mrs. Tease, Mrs. Lee and Mrs. Colby.

The president announced that Mrs. William Sargent as chairman and Mrs. Harry Hund of Marin County had been elected by the board to serve on the Nominating Committee with three other members who were elected from the floor as follows: Mrs. Philip Stevens by Mrs. Doane, Mrs. Charles Howard by Mrs. Black and Mrs. Clarence Page by Mrs. Trimble.

There being no further business, the meeting adjourned.

Respectfully submitted,

Mrs. C. Kelly Canelo, *Recording Secretary.*

* * *

Minutes of the Second Session of the Seventh Annual Meeting of the Woman's Auxiliary to the California Medical Association

Wednesday, May 27, 1936.—The second session of the seventh annual meeting of the Woman's Auxiliary to the California Medical Association convened at 9:30 a. m. at the Coronado Yacht Club, Wednesday, May 27, 1936, with Mrs. Thomas J. Clark, president, presiding.

Mrs. David Froehlich, chairman of the Credentials Committee, reported forty-one delegates registered, twenty-nine alternates, twelve guests, sixteen board members, 116 Auxiliary members, making a total of 214.

The recording secretary called the roll of the State Board members and of the delegates by counties.

The minutes of the first session of the seventh annual meeting were read by the recording secretary and approved.

Mrs. Froelich read two telegrams: From Mrs. A. M. Henderson of Sacramento and Mrs. Louis H. Dyke of Oakland.

Mrs. E. E. Coulter, historian, being absent, Mrs. Doane read her report and presented the book for the history of the Auxiliary complete, from its inception to the present time.

Mrs. Henderson of Santa Barbara County moved the report of the historian be accepted. Mrs. Barrow seconded the motion. Carried.

Mrs. Clark announced Mrs. Doane had been elected third vice-president of the National.

Reports of the councilors at large were ready by: Mrs. Annis of Los Angeles County, Mrs. Ray Carr Green of Orange County, Mrs. Mark A. Glaser of Los Angeles County, Mrs. Frederick Scatena of Sacramento County.

Mrs. Geiger of San Francisco County moved these reports be accepted. Mrs. Cox of San Francisco County seconded. Motion carried.

The president then ordered these reports placed on file.

Reports of the district councilors were given as follows:

1st District—Mrs. Elliott Colby.

3rd District—Mrs. N. N. Brown.

5th District—Mrs. John Hunt Shephard.

6th District—Mrs. Geiger gave the report for Mrs. Becker.

7th District—Mrs. Fernandez gave the report for Mrs. Weill.

8th District—Mrs. Junius Harris.

9th District—Mrs. Harry Hund.

No objections being offered, the president declared these reports accepted and placed on file.

Report of county presidents were given as follows:

Alameda—Mrs. Page reported for Mrs. Sutterland.

Contra Costa—Mrs. Fernandez reported for Mrs. Carpenter.

Fresno—Mrs. Anderson reported for Mrs. Manson.
Kern—Mrs. N. N. Brown.
Lassen-Plumas—Mrs. Froelich read report from Mrs. Davis.
Los Angeles—Mrs. Barrow.
Marin—Mrs. Robert M. Furlong.
Orange—Mrs. Ray C. Green.
Riverside—Mrs. Hervey S. Faris.
Sacramento—Mrs. Frederick Scatena.
San Diego—Mrs. Emil C. Black.
San Francisco—Mrs. J. C. Geiger.
San Joaquin—Mrs. Brodius reported for Mrs. Langdon.
Santa Barbara—Mrs. Hunt reported for Mrs. Pierce.
Santa Clara—Mrs. Russell Lee.
Siskiyou—Mrs. Seely sent in a report.

Mrs. Annis of Los Angeles County moved these reports be accepted and placed on file. Seconded by Mrs. Frank Makinson of Alameda. Motion carried.

The report of the Committee on Resolutions, with Mrs. Chester Teass as chairman, was read and accepted. Motion of acceptance made by Mrs. Scatena, seconded by Mrs. Geiger. Carried.

The report of the Nominating Committee was read by Mrs. William Sargent, chairman, as follows:

President-elect, Mrs. Solomon N. Weil of Contra Costa County; First Vice-President, Mrs. C. A. Wright of Los Angeles County; Second Vice-President, Mrs. John Barrow of Los Angeles County; Recording Secretary, Mrs. Hobart Rodgers of Alameda County; Treasurer, Mrs. Frank Makinson of Alameda County.

Councilors at Large—Mrs. Mark Glaser of Los Angeles County, Mrs. Robert M. Furlong of Marin County, Mrs. Rodin of San Francisco County, Mrs. Annis of Los Angeles County.

Respectfully submitted,

Mrs. Sargent,
Mrs. Hund,
Mrs. Howard,
Mrs. Paige,
Mrs. Stevens.

Mrs. Lee of Santa Clara County moved these nominations be closed. Seconded by Mrs. Shephard of Santa Clara County. Carried.

By unanimous viva voce vote the names presented for the offices provided for in the Constitution were elected and so declared by the president.

The president then announced elections were in order for district councilors for the following districts: 1, 2, 4.

1. Mrs. Dexter Ball of Santa Ana nominated by Mrs. Lundenmueller of San Diego, seconded by Mrs. Black of San Diego.

2. Mrs. B. H. Sherman of Los Angeles nominated by Mrs. Barrow, seconded by Mrs. Pallette of Los Angeles.

4. Mrs. George Walker of Fresno nominated by Mrs. A. E. Anderson of Fresno, seconded by Mrs. Brodius of San Joaquin County. Mrs. Anderson made the motion that those nominated be accepted. Mrs. Black seconded the motion. Carried.

Mrs. Clark then presented the president for 1936-37, Mrs. Andrew Thornton of San Diego, who was enthusiastically acclaimed by the assembly. Mrs. Clark then introduced the other incoming officers.

The final report of the Committee on Credentials was read by Mrs. David Froelich showing forty-one delegates, twenty-nine alternates, twelve guests, sixteen board members, 116 Auxiliary members, making a total of 214.

Mrs. Doane of Los Angeles County moved a vote of thanks be given the recording secretary for her splendid and efficient work. Seconded by Mrs. Percy of Los Angeles and carried.

Mrs. Clark thanked the Auxiliary members for their help and asked their support for Mrs. Thornton. A round of applause was given Mrs. Clark for her fine work as president.

The secretary then read the minutes of the meeting, which were approved as read. There being no further business, the meeting adjourned at 12 o'clock noon.

Respectfully submitted,

Mrs. C. Kelly Canelo, *Recording Secretary.*

Nothing in human experience outranks learning. By it alone man rises above dumb creatures. If, therefore, we have received nothing else so good as the mind, what should be more worth cultivating? No quest of gold or worldly power has in the long run ever brought like gratification. No other adventure is to be compared with it. Through it civilization and all man's higher achievements have been won.

Another quaint custom is passing away: College graduates are becoming less prone to frame their diplomas and hang them on walls for callers to admire. So vanishes one more of our whimsies that used to divert cultivated European travelers, like Spencer and Dickens. Decorating offices and parlors in that way was linked with the notion that to be graduated was to have finished one's education.—U. C. Extension Division.

Education is a life-long process. Much of it goes on spontaneously. In that way it goes on when as infants we are finding our hands; and is still going on years later when, with those same hands, we endorse a speculator's note. Every experience leaves with us an educational by-product. In numberless ways we learn, yet remain the while unconscious that we are being schooled. It is only when we become aware of some lack in ourselves, some deficiency, that we are stirred to the point of making a conscious effort to learn.

Human Side of Practice.—It may be that the real meaning of the human side of practice will not come to you until as the family doctor you enter the home where with no intern, no attending man, you must shoulder the full responsibility for the treatment of a serious illness. You are making your evening visit on the man with pneumonia. He is an interesting case. You record with care the physical signs, the blood count, and the blood pressure. You are leaving the final directions for the night. The patient's breathing is rapid and labored, the delirium is marked. As he moans with pain of the cough, you note the look of anguish on the face of the young wife who stands near with the two-year-old hanging to her skirt. There are signs that another baby will come soon. Suddenly you sense it all. The loss of this husband, this father, this wage-earner, means not only a broken heart. It means wrecked hopes, a shattered home, the wife the future wage-earner. You say, you scarcely know why: "This may be a critical night; I will stay." You have unconsciously transmuted your emotion into an act of service. The look of gratitude from the dim eye of the wife is your ample reward. You have learned something of the human side of practice. The patient is a case, to be sure, but the case is a man.—John B. Herrick, M. D.

Figurative Language.—We doctors too often forget that patients do not always grasp our meaning because we employ language they do not understand.

I could not convince a man of sixty-five that the trace of albumin in his urine was not of serious significance. On his report from the bureau of analysis was the finger, rubber-stamped in violet ink, pointing to the word albumin. This outweighed all my reassurances. One day I said: "Why do you not worry about your wrinkles and your gray hair?" "Why, doctor," he said, "am I not entitled to gray hair at sixty-five?" "You are," I replied, "and so you are to have a trace of albumin in the urine. Your trouble is simply gray hair in the kidney." I saw him no more for two years, when he again came to see me. "You don't remember the circumstances, doctor, but I was upset by your statement. I went to another doctor, who promptly found Bright's disease. When he asked me what your diagnosis had been and I told him 'gray hair in the kidney,' he was indignant and furious. He said he had never heard such a fool diagnosis in all his life. He had always thought Doctor Herrick, etc." *Haec fabula docet:* Beware of using figurative language in speaking to a patient who is literally minded.—John B. Herrick, M. D.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Atlantic City, New Jersey, June 7-11, 1937. Olin West, M. D., 535 North Dearborn Street, Chicago, secretary.

California Medical Association, Del Monte, May 2-5, 1937. F. C. Warnshuis, M. D., 450 Sutter Street, San Francisco, secretary.

Pan-Pacific Surgical Congress, Honolulu, Hawaii, August 6-14, 1936. George W. Swift, M. D., 902 Boren Avenue, Seattle, Washington, president.

Washington State Medical Association, Yakima, August 31-September 2, 1936. Vernon W. Spickard, M. D., 1303 Fourth Avenue, Seattle, secretary.

Medical Broadcasts *

The American Medical Association broadcasts have been discontinued for the summer months. A new series is under consideration for the autumn and winter of 1936-1937.

San Francisco County Medical Society.—The radio broadcast program for the San Francisco County Medical Society for the month of August is as follows:

Tuesday, August 4—KYA, 6 p. m.
Tuesday, August 11—KYA, 6 p. m.
Tuesday, August 18—KYA, 6 p. m.
Tuesday, August 25—KYA, 6 p. m.

* * *

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of August is as follows:

Saturday, August 1—KFI, 9 a. m. Subject: The Road of Health.
Saturday, August 1—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, August 4—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, August 8—KFI, 9 a. m. Subject: The Road of Health.
Saturday, August 8—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, August 11—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, August 15—KFI, 9 a. m. Subject: The Road of Health.
Saturday, August 15—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, August 18—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, August 22—KFI, 9 a. m. Subject: The Road of Health.
Saturday, August 22—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, August 25—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, August 29—KFI, 9 a. m. Subject: The Road of Health.
Saturday, August 29—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Proposed Initiative to Open County Hospitals; Interesting Newspaper Item on Insufficiency of the Petitions.—The Lodi, California, *News-Sentinel* of July 14 printed the following item:*

VOTE DELAYED ON HOSPITAL PAY POLICIES

A decision to postpone the vote upon the constitutional amendment which would allow pay patients to enter the county hospital was announced at the meeting of the directors of the San Joaquin County Farm Bureau in Stockton Saturday. Therefore, the measure will not be on the ballot at the November election.

Two reasons were cited by Harvey S. Van Vlear, secretary, for the decision. One was that the California ballot at the next election will contain about forty proposals and it is feared the pay patient proposition might not be given adequate study.

The other reason, Van Vlear said, is that while supplementary filing of names is permitted after the deadline on petitions, the Farm Bureau feels that it would have insufficient time to obtain enough names if large percentages were rejected by county clerks in checking the lists.

Circulation of the petitions will continue, and the petitions will be filed soon after the necessary 186,000 signatures are obtained, Van Vlear announced.

Filing of the petitions will make the proposal eligible for the next general or special state election. The secretary pointed out that it is more than likely that the issue will be voted on at some special state election before the next general poll.

Up to Friday night 100,000 voters had signed the petitions, but county clerk rejections were rather heavy, said Van Vlear. The entire state, he said, is looking to San Joaquin and Kern counties for leadership in the campaign. San Joaquin County will obtain 25,000 signatures to the petition before the drive is halted here, Van Vlear said.

I. N. Robinson, chairman, finance committee, reported the party given recently by the Farm Bureau in the Civic Memorial Auditorium netted $1,147.39.

Stockton "Independent" Discourses Editorially on the "Open the County Hospitals to Pay Patients" Initiative.—In connection with other items and comments in this issue, the following, from the Stockton *Independent* of July 15, should be of interest:

HOSPITAL PETITION WILL NOT FAIL

It is a matter of regret that the Farm Bureau faces conditions that make the filing of the hospital initiative petition near impossible and probably inexpedient at this time.

There are 25,000 voters, and to spare, in this county who would be ready signers if the petitions were laid on the table before them. But there are physical limitations on what even the civic spirited Farm Bureau workers can do. The quota of signers for this county is undeniably large. It was made necessary by the fact that the hospital issue is acute in only about one dozen counties. Hence, it is hard to have volunteer workers in communities that know nothing of the question at stake.

Then, too, there is good reasoning in the bureau's conclusion that this would be a poor year to put such a localized issue on the big ballot. Presidential issues engross public attention, and already scores of propositions encumber the ballot that will be laid before the people. There are proposals on which vast sums will be spent in the form of propaganda. Naturally these will be shoved to the front. A proposal like that of keeping the doors of a county hospital open to pay patients, with no big fund to publicize it, would be exposed to failure through public indifference or misunderstanding in counties that are not interested.

The decision of the bureau to go ahead and complete the petitions, as to the number of signers required, even

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* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

* See also editorial comment concerning this proposed amendment in this issue (page 113).

if several more months are required for the work, is wisely foresighted.

The completed petition will be a powerful argument before the legislature; and if the law makers should fall down before the spell of the state medical society, the petitions will be ready for use at the next election.

The *Independent* commends the men and women of the Farm Bureau and Secretary Van Vlear for their good work in the good cause. Let them "fight it out on this line if it takes all summer." *The "Independent" is enlisted for the duration of the war, and will stand behind them until victory comes.*

Stanford University School of Medicine Postgraduate Courses.—A series of postgraduate medical courses for practicing physicians will be given by Stanford University School of Medicine in coöperation with the San Francisco Department of Public Health and the San Francisco Hospital during September 14-18, 1936, inclusive. There will be a registration fee of twenty-five dollars. Each physician may take a morning and an afternoon course and all physicians should attend the evening general meetings. Registration closes September 10, 1936. Applications for registration in these courses should be mailed to the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco, not later than September 10.

The courses follow:

MORNING COURSES

Course 1—Obstetrics and Gynecology

Monday, Tuesday, Wednesday, Thursday and Friday, 8:30-12:00.

This course will review the female pelvis and its relation to labor; maternal and fetal metabolism during pregnancy, toxemias of pregnancy; an analysis of menstruation with relation to associated endocrinology, cardiac disease and anemia; treatment of dysmenorrhea, ectopic gestation; birth control and contraception.

Course by Doctors L. A. Emge, C. F. Fluhmann, T. H. Kelly, A. V. Pettit, K. L. Schaupp, H. A. Stephenson, and Hans Von Geldern.

Course 2—Gastro-enterology

Monday, Tuesday, Wednesday, Thursday and Friday, 8:30-12:00.

This course will review methods of examination, general considerations of diseases of the gastro-intestinal tract; the medical and surgical aspects of diseases of the esophagus, peptic ulcer, biliary tract, colitis, appendicitis, intestinal obstruction, and gastro-intestinal malignancies. All discussions will be illustrated by case records, patients, lantern demonstrations, x-rays, etc. No operative clinics.

Course by Doctors A. L. Bloomfield, W. W. Boardman, Edmund Butler, L. R. Chandler, Garnett Cheney, P. K. Gilman, E. F. Holman, G. W. Nagel, R. R. Newell, R. A. Scarborough and H. A. Wyckoff.

Course 3—Pediatrics

Monday, Tuesday, Wednesday, Thursday and Friday, 8:30-12:00.

This course will review four general groups of pediatric problems: (1) The care of normal infants and children, including infant feeding; (2) the prevention of disease, including deficiency diseases and methods of immunization; (3) the commoner disorders and diseases of childhood, including the communicable diseases; (4) disturbances of mind and behavior, and methods of child guidance. Surgical problems also will be discussed. The course will consist of lectures, clinics, presentation of cases, and class discussions.

Course by Doctors W. C. Black, L. R. Chandler, L. B. Dickey, H. K. Faber, M. H. Layman, D. C. Marshall, M. I. Preston, A. P. Purdy and R. P. Seitz.

Course 4—Cardiology (Limited to fifteen physicians)

Monday, Tuesday, Wednesday, Thursday and Friday, 8:30-12:00.

The examination and study of cardiac patients by small groups will be supplemented by discussions and the demonstration of methods, use and interpretation of electrocardiography, and fluoroscopy.

Course by Doctors William Dock, J. K. Lewis, W. W. Newman and J. M. Read.

* * *

AFTERNOON COURSES

Course 5—Hypertension and Nephritis

Monday, Tuesday, Wednesday, Thursday and Friday, 1:30-5:00.

This course primarily will cover office management of patients with hypertension and nephritis, using certain simple methods of examinations of blood and urine. These facts will be used as a basis for discussion of treatment. Approximately quantitative dietetic methods will be used.

Course by Doctors Thomas Addis and D. A. Rytand.

Course 6—Neurology and Psychiatry

Monday, Tuesday, Wednesday, Thursday and Friday, 1:30-5:00.

This course will consider the diagnosis and treatment of the common disorders of the central nervous system with special emphasis on the treatment of the psychoneuroses in general practice and a consideration of special problems in neurosurgery and neuropathology.

Course by Doctors Joseph Catton, G. S. Johnson, H. W. Newman, F. L. Reichert and W. F. Schaller.

Course 7—Fractures and Traumatic Surgery

(At San Francisco Hospital)

Monday, Tuesday, Wednesday, Thursday and Friday, 1:30-5:00.

This will be an informal course on the examination and treatment of fractures, use of local anesthesia, demonstrations of application of plaster, adhesive and skeletal traction, skull fractures, surgical approaches (cadaver), joint derangements, fracture follow-up clinic, infections of the hand.

Course by Doctors N. J. Howard, D. E. King, Carleton Mathewson, E. J. Morrissey and E. B. Towne.

Course 8—Proctology (Limited to fifteen physicians)

Monday, Tuesday, Wednesday, Thursday and Friday: 1:30-5:00.

This course will review common lesions of the large bowel, rectum, and anus, including common methods for office practice, operative indications and technic, pathology, differential diagnosis, etc.

Course by Doctor Scarborough.

Course 9—Otorhinolaryngology (For specialists only; general practitioners are not eligible for this course)

Monday, Tuesday, Wednesday, Thursday and Friday, Mornings, 9:00-12:00; afternoons, 2:00-5:00.

This course will cover anatomy, physiology, pathology; practical operative work on cadavers; treatment of diseases of the ear, nose and throat.

Course by Doctors, R. E. Ashley, J. A. Bacher, C. B. Cowan, S. v. Christierson, F. D. Fellows, H. A. Fletcher, H. B. Graham, H. Y. McNaught, R. C. McNaught, A. G. Rawlins and E. C. Sewall.

An additional fee of $7.50 will be charged to cover the cost of anatomical materials used in this course.

* * *

General meetings will also be held each day in Lane Hall, 8:00-10:00 p. m.

Meeting 1—X-Ray Therapy

Dr. Robert Newell and staff

Monday evening, 8:00-10:00

Meeting 2—Backache

Doctors A. L. Bloomfield, D. E. King and L. A. Emge

Tuesday evening, 8:00-10:00

Meeting 3—Blood Diseases

Doctors H. P. Hill, H. A. Wyckoff and Garnett Cheney

Wednesday evening, 8:00-10:00

Meeting 4—Syphilis, Diagnostic Methods and Therapeutic Agents

Dr. C. W. Barnett

Thursday evening, 8:00-10:00

The Prevention of Cancer.*—Among the silent and sinister economic leeches which sap the blood of civilization, few do a more thorough and tenacious job than does cancer. All the material which the world needs for the greater proportion of cancer is education and the opportunity to obtain, at a low cost, the professional or medical help for which such education calls. Cancer is a disease that thrives on ignorance and must be fought with knowledge.

Fortunately cancer can be prevented. Some of the preventive measures are:

1. The observation of scrupulous cleanliness of the skin, the mouth cavity and the genital canal. This means

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* From Clinical Medicine and Surgery, December, 1935.

the avoidance of infections or, if they occur, the obtaining of medical treatment to cure them.

2. Moderation in everything concerning the daily life and habits, especially in the use of tobacco; moderate and slow eating; avoidance of food and drinks that are either too hot or too cold or too irritating, such as alcohol in high concentration.

3. The avoidance of chronic constipation end of the consumption of irritating foods, not by using cathartics but by training the bowel to function regularly and by acquiring the habit to devote a daily, regular time to this function.

4. Keeping the body in a perfect state of health by regular hours of rest, sleep and exercise. One should sleep regularly eight hours and spend at least several hours daily in the open air with moderate exercise, such as walking, swimming, riding, golfing, tennis, bowling and so forth.

5. The periodic examination; that is, a yearly examination of men and women and the examination, in women, of the breasts and the genital system, especially after pregnancy and labor, and yearly after the thirty-fifth year of life. The preferable day would be one's birthday as this day is not easily forgotten and such an examination is a fine birthday present.

6. The immediate reporting to the family physician of any lump on the body, of any sore that does not heal within a week, of any discharge or bleeding from any of the body openings, as the nose, the mouth, the genital or urinary canals and the rectum.

The conscientious family physician will refer the patient to a specialist or clinic for an immediate correct diagnosis, after the examination, if he cannot make it. Many conditions (probably 95 per cent) will not be cancerous, and those that are will be detected and offered the best guarantee of a permanent cure if immediately and adequately treated. Those that are not malignant can be treated without great discomfort and at slight expense and the chronic tissue changes are thereby removed.

Los Angeles City Receiving Hospital.—The Los Angeles *Herald-Express* printed the following item, the last sentence being of especial interest:

> RECEIVING HOSPITAL MADE INDIVIDUAL UNIT BY COUNCIL
>
> An ordinance divorcing the receiving hospital from its present affiliation and permitting it to function as an individual unit whereby the chief surgeon will become the general manager of the institution subject to city council appointment, passed first reading in council yesterday, records today disclosed.
>
> While the general manager will be appointed by the city council, other offices will be filled by the chief of police from available civil service rolls, it was announced. Operation of the institution will not be changed. All residents of the city, including city firemen and policemen, will be treated free of charge. Slight opposition developed in the council chambers yesterday over the absence of a provision in the ordinance stating that treatment of firemen and policemen should be limited to injuries received only in line of duty.

California Industrial Accident Commission.—There were in all 262,955 industrial injuries reported for the calendar year 1935, an increase of 32,054 injuries or 13.8 per cent.

Of these, 551 caused death, an increase of 124 deaths or 29.0 per cent in comparison with the calendar year 1934; 748 caused a permanent impairment of at least 1 per cent, an increase of sixty permanent disabilities or 8.7 per cent; 71,488 caused a temporary disability lasting longer than the day of injury, an increase of 5,595 temporary disabilities, or 8.4 per cent; 190,168 were no-disability cases but which required medical service other than ordinary first aid treatment, an increase of 26,275 no disabilities or 16.0 per cent.

The principal industries for which increases were reported were agriculture 9.3 per cent increase, mining and milling 8.4 per cent, foods and beverages manufacturing 9.6 per cent, lumber and wood manufacturing 7.0 per cent, building construction 7.6 per cent, stevedoring and freight handling 8.9 per cent, railroad operation 9.0 per cent, and motion picture production 63.6 per cent.

National Medical Council on Birth Control.—The National Medical Council on Birth Control was organized in June, 1936, for the following purposes:

1. To control and supervise all medical policies of the American Birth Control League.

2. To initiate, encourage, and execute appropriate scientific research in the medical aspects of birth control.

For information, apply to 515 Madison Avenue, New York, N. Y.

Los Angeles Cancer Society.—The Los Angeles Cancer Society held its first regular meeting on June 17, 1936, in the County Medical Building, and was attended by some thirty men, to be known as charter members, who are appointees from the various accredited hospitals in and about Los Angeles, including a group from the Pasadena Hospital, United States Veterans' Hospital at Sawtelle, Santa Barbara Cottage Hospital, Santa Barbara; also groups from the Los Angeles General Hospital, California Lutheran, Cedars of Lebanon, Good Samaritan, Hollywood, Methodist, Queen of the Angels, St. Vincent's, White Memorial, and a representative from the American Society for the Control of Cancer.

The purpose of this society as covered by the by-laws is to "bring together physicians interested in the study of cancer and allied neoplastic diseases and for correlating activities of the several committees or boards for study of cancer."

The membership is composed principally of pathologists, surgeons, radiologists, internists, and other men vitally interested in the cancer problem. Members of the Los Angeles County Medical Society wishing to join the Los Angeles Cancer Society may do so by making application to the secretary for approval by the members of this society.

Officers elected for the year include: President, Dr. Newton G. Evans; vice-president, Dr. William E. Costolow; secretary-treasurer, Dr. C. Hiram Weaver; Executive Committee, Doctors George S. Sharp, James F. Percy and Donald G. Tollefson.

Regular meetings will be held four times each year with the Executive Committee empowered to call extra ones as they deem necessary.

National Nursing Convention: Los Angeles Session. California nurses, California skies and California sunshine all gave a radiant welcome to the thousands of nurses who attended the great 1936 National Biennial Nursing Convention in Los Angeles, June 21 to 26.

Teas, dinners, luncheons and breakfasts—both formal and informal—were held by divisions and sections of the American Nurses' Association, by reunited friends, alumnae associations and public health nurses. Local groups—the hospitals, visiting nurse associations and Red Cross Chapter—opened their doors to the visitors, and even the Los Angeles sheriff invited the nurses to a cup of tea in jail—with a visit to the prison hospital thrown in!

The convention program was filled to the hilt with interesting meetings of all kinds. Meetings started early—in fact, officers of the associations started the day around 5:30 a. m., in order to assemble facts, materials and ideas necessary to assure the smooth running of sessions. Getting an early breakfast was a problem! When the Ambassador Hotel was asked to serve that important meal at 5:30 one morning, the answer was that it was not a working man's hotel! Consequently, breakfast could not be had until 6:30!

Approximately 6,000 nurses registered, and several thousand more, though omitting the detail of registering, attended the meetings.

All nurses who attended the convention except those from the North and Hawaii, were Easterners, according to the Californians. Said a California nurse to a New Yorker: "I'm looking for a nurse from the East. I wonder where I could find her." "What part of the East is she from?" asked the New Yorker. "Nebraska," was the answer!

American Congress of Physical Therapy.—Announcement is made of the fifteenth annual clinical and scientific session of the American Congress of Physical Therapy, September 7, 8, 9, 10 and 11, at the Waldorf-Astoria, New York City. The program includes many special features: sectional meetings in the specialties, symposia on short wave diathermy, hydrotherapy, exercise and electroresection. Fever therapy and the treatment of vascular diseases occupy an important place and will be discussed by prominent workers in the field. The educational aspects of physical therapy and the relationship of physical therapy technicians to physicians and hospital departments will be thoroughly dealt with. Other features include technical and scientific exhibits and a full day of hospital clinics where technique will be adequately demonstrated.

First International Conference on Fever Therapy.—The first International Conference on Fever Therapy, originally scheduled for the end of September, 1936, has been postponed because of numerous requests, to permit more time for the preparation of material. The new dates set for this conference are March 30 to April 2, 1937. The sessions will be held at the College of Physicians and Surgeons, Columbia University, New York City.

The advances in the treatment of gonorrhea, syphilis, and other diseases by pyretotherapy are of great social significance. Invitations on behalf of the conference will be issued by the State Department of the United States to Ministries of Public Health of other countries. The medical departments of the Army, the Navy, and the Public Health Service of the United States of America will be represented, as will also the New York City Departments of Health and of Hospitals.

A tour has been arranged to take place immediately following the conference, to enable physicians to observe the techniques employed in fever therapy in some of the hospitals in the eastern section of the United States. Among the institutions to be visited are the Strong Memorial Hospital of the University of Rochester, New York; the Henry Ford Hospital, Detroit; the Mayo Clinic, Rochester, Minnesota; the Kettering Institute for Medical Research at the Miami Valley Hospital, Dayton; Northwestern University Medical School, Chicago.

Further information regarding the conference may be obtained from the general secretary, Dr. William Bierman, 471 Park Avenue, New York City, U. S. A.

XV Concilium Ophthalmologicum.—According to the decision of the Fourteenth International Congress held in Madrid in April, 1933, the next Congress will be held in Cairo, Egypt, under the high patronage of H. M., the King of Egypt.

In conformity with the decision of the International Council of Ophthalmology, London, April, 1935, the meetings will be held from December 8 to 14, 1937.

The two official subjects of the Congress will be:

1. Arterial Hypertension of the Retina.
2. Endocrinology and the Eye.

Two exhibitions will be arranged:

1. *A Scientific Exhibition*, comprising anatomical and pathological specimens or slides, photogrphs, radiographs, etc. Members wishing to partake will please communicate with the secretary general, stating the object to be exhibited, its size, etc.
2. *A Commercial Exhibition*, comprising instruments, apparatus, drugs, printed matter, etc.

Inscription for membership to the Congress is open for every medical man, and those who desire should write for the enrollment form and send it to the secretary general, as early as possible, together with the sum of 50 Swiss francs, to cover the fees for subscription. The fees for ladies and other associate members of the congressists' families are 25 Swiss francs per person—those can attend receptions, excursions, etc., but are not entitled to attend the scientific meetings, nor will they receive a report of the proceedings of the meetings.

All correspondence should be forwarded to the secretary general, XV Concilium Ophthalmologicum, P. O. B. No. 2001, Cairo, Egypt.

Hay Fever and Other Allergic Diseases.—A chemical study of substances in agricultural products and by-products that contribute to the allergic disturbances—hay fever, asthma, hives, and related afflictions—is being established in the Bureau of Chemistry and Soils of the United States Department of Agriculture, Dr. W. W. Skinner, assistant chief of the bureau, announced today.

One-tenth of the population of the country suffer seasonal distress or continual discomfort and restricted activity as the result of allergic diseases known by such familiar names as hay fever, pollen fever, rose fever, rose colds, asthma, hives, and so on. These afflictions affect people of all ages. Some individuals suffer from abnormal sensitiveness to certain normal constituents of the pollens produced by many varieties of trees, grasses, and weeds. Similar substances present in common foods, textile fibers, furs, and other farm products are also capable of causing distressing disturbances when absorbed through the skin or the membranes of the respiratory or digestive systems of supersensitive persons. Chemists and specialists in other lines of scientific investigation will attempt to isolate these offending components and to determine their composition.

Dr. Henry Stevens, biochemist of the Protein and Nutrition Division of the Bureau of Chemistry and Soils, is organizing the staff which will undertake the allergen investigations. Dr. Harry S. Bernton, Professor of Hygiene at the Georgetown University Medical School, has been appointed consulting specialist in allergy and will participate in the department studies of the allergens.

Funds for this investigation, provided by the Bankhead-Jones Act, signed by President Roosevelt a year ago, will enable the Federal Department of Agriculture and state agencies to proceed with long-deferred researches of fundamental significance to agricultural science.

Leon Asher, M. D.*—An interested and interesting visitor to the United States this summer is Dr. Leon Asher, 71-year-old professor of Physiology, University of Berne, Berne, Switzerland. Invited by the Mayo Clinic to present a series of lectures on physiology, Doctor Asher's dynamic personality and original views have extended his fame over the country so rapidly that he was besieged with more invitations to address university and medical groups than he could accept. In the course of his tour of the United States with Mrs. Asher, he addressed large audiences in the middle west, the northwest and along the Pacific Coast, returning to Switzerland late in Junue. Professor Asher was a guest speaker at the California Medical Association Coronado annual session.

Interviewed by the editor of *Food Facts* after his address to the Minnesota State Medical Association at Rochester, Minnesita, on May 5, Doctor Asher expressed himself as bewildered by the great variety of dietary fads that he has encountered during his visit. He says Americans are altogether too worried about the state of their heatlh and the kind of food they eat.

"We have food faddists in Switzerland, but in no such number as are to be found in the United States," commented the venerable professor, who at 71 is as hale and hearty as a well preserved man of 50.

"Man has not lost his instinct to select the kind of food his body needs," continued the doctor. "Taste is an important factor in food selection, but food faddists often influence people to stop eating what they like and what is good for them. An outstanding example of this is bread. It is one of our basic foods that has suffered from unfair attacks by food faddists."

Doctor Asher says that about the same types of bread eaten in the United States are served in Switzerland. The favorite breadstuff of the Swiss is the hard roll made of white flour, although such breads as whole wheat, rye, etc., are used for variety. Almost all of the flour used in Switzerland is imported.

"You can't beat good white bread and milk as the foundation of any diet," says Doctor Asher, "and the two alone make a nourishing lunch sufficient for any man."—*Food Facts*.

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* Professor Leon Asher was a guest speaker at the Coronado annual session of the California Medical Association, May 27, 1936.

Tuberculin Testing of California Dairy Herds.—On page 91 of the July, 1936, issue of California and Western Medicine was printed the resolution on Tuberculin Testing of California Dairy Herds, adopted at the recent Coronado annual session by the House of Delegates. On this same subject, the Los Angeles *Herald-Express* of July 22 printed the following item:

CATTLE TESTS COVER WIDE CALIFORNIA AREA

By United Press

SACRAMENTO, July 22.—With the start of work recently in Colusa County, the Federal bovine tuberculosis eradication program in California has been extended to twenty-three counties, it was announced here.

In the past month most of the Federal testing, authorized under the Jones-Connally act, has been done in the counties of Humboldt, Sonoma, Marin, San Joaquin, Fresno, Kings and Tulare.

"Under the Federal-state coöperative eradication program, retesting of previously infected herds has been conducted recently in the counties of Del Norte, Butte, Orange and San Bernardino," a report of the State Department of Agriculture said.

Reduce Infection

"By reason of the eradication work, extent of infection in those counties has been reduced to a very low point. Retesting has been started more recently in Santa Barbara, Los Angeles and San Diego counties. In the eradication of bovine tuberculosis it is necessary to retest herds periodically in order to assure the elimination of possible sources of infection."

The report also pointed out that testing under the pure milk provisions of the state law has been completed in San Luis Obispo, Monterey and San Benito counties.

Milk Tested

"This work is required in connection with the law covering distribution of dairy products in the raw state for human consumption," the report explained. "If the cattle are not free from tuberculosis as indicated by tests, the dairy products must be pasteurized. This pure milk testing is conducted regularly by the department in counties which have not been designated tuberculosis control areas."

It was announced recently by Los Angeles health authorities that northern California cattle which have not undergone non-tuberculin tests would be banned from Los Angeles. The order was held necessary because of activities of minority groups in refusing to have their herds tested.

LETTERS

Concerning status of proposed "Open County Hospital Initiative"; report from Public Health League.*

Los Angeles, July 22, 1936.

To the Editor:—We have just completed a check-up on the county hospital proposition with the results as noted in the enclosed. I thought perhaps you might want to use this in California and Western Medicine.

With kindest personal regards, I am

Sincerely yours,

Ben H. Read,
Executive Secretary.

563 Chamber of Commerce Building.

* * *

The Public Health League reports that a survey of all of the counties of the state indicates that scattered petitions for the County Hospital Initiative were filed in eleven counties with a total of approximately 12,500 valid signatures. Sponsors of the proposal had notified their local committees not to file the petitions at this time and had wired several county clerks not to accept petitions. But a few were filed in eleven counties despite these instructions.

In announcing that the county hospital proposal would not be placed on the November ballot, Harvey S. Van Vlear, secretary of the San Joaquin County Farm Bureau, gave two reasons: one that the ballot will contain about forty proposals and it is feared the hospital plan would not receive adequate study. The other reason was that heavy rejections of signatures by county clerks might invalidate the petitions. It was stated that 100,000 voters had signed the petitions up to July 10.

The sponsors of the proposal have announced that they will continue to circulate the petitions until the required 186,000 valid signatures are secured—some time this fall. This will qualify it for the 1938 election or for any special election that may be called during the coming year. Commenting upon this strategy, the Stockton *Record* editorially hints that the issue may be used as a weapon when the legislature meets in January. The editorial says:

"By holding up the proposed initiative until a later election, sponsors of the movement will escape the necessity of trying to impress an obviously overburdened public. They will place themselves in a position to more carefully lay the groundwork for a campaign in a year when fewer diverting interests exist. What they have done to date will in no way lose its value. With the initiative ready to qualify at a moment's notice the issue will remain alive and may even serve a valuable purpose when the legislature meets."

Thus it is seen that this subject is still with us and will continue to be of paramount political importance until it finally reaches a vote of the people either in 1937 or 1938.

Concerning proposed initiative to open county hospitals to both indigent and pay patients.

July 7, 1936.

To the Editor:—The attached copy of a letter to Dr. Louis A. Packard, Bakersfield, is self-explanatory and is sent for your information.

With kindest regards, I am

Sincerely,

J. C. Geiger, M. D.
Director of Public Health,
City and County of San Francisco.

* * *

Louis A. Packard, M. D.
Bakersfield
California

June 30, 1936.

J. C. Geiger, M. D.,
50 Ventura Avenue,
San Francisco, California.

Dear Doctor Geiger:

I am taking the liberty to remind you by letter of the promise you made at Coronado following the meeting of the House of Delegates. I have been reminded on numerous occasions since that evening by other delegates who were present and heard the conversation and asked if you had offered any solution. Only this morning I received another communication from the northern part of the state to that effect.

Since you were so positive in your statement before the House of Delegates and since your comments were at least partly responsible for the application of the drastic tabling move we feel that you should carry out your promise to offer a solution. I am certain that all of those present felt that it would be no great effort on your part.

Awaiting your reply with pleasure, I am,

Sincerely yours,

Louis A. Packard, M. D.

* * *

Office of
Director of Public Health
City and County of
San Francisco

July 7, 1936.

Louis A. Packard, M. D.,
Haberfelde Building,
Bakersfield, California.

My dear Doctor Packard:

Thank you very much for your note of June 30, relative to the initiative petition now being circulated opening county hospitals for pay patients. As I had a previous communication from Dr. John W. Green, secretary of the Solano County Medical Society, on the same subject, which was submitted to the various members of my staff for certain suggestions, the same reply sent to him is being sent to you.

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* See also editorial comment in this issue, on page 113.

During the conversation at Coronado I told you I would be very glad to submit my ideas with, of course, the realization that these are not a solution but just a personal opinion of the problem.

May I state most emphatically, as I did at Coronado, that the opening of county hospitals for other than indigents would be a sad mistake and should not be done. Furthermore, that the decision of the medical profession as represented at Coronado is correct in that it would oppose to the limit of its ability this initiative petition; that I am of the opinion that it should be done through education, publicity, paid advertising and through lay organizations, especially the taxpaying groups. Finally, the set-up of the San Francisco Department of Public Health is to me ideal, and this is what I had in mind in my conversation with you. I am sure, however, this set-up is familiar to you, but it is briefly as follows:

1. All county institutions dealing with the indigent ill, particularly the county hospital, are under the Director of Public Health, who presumably was appointed for his training in and knowledge of public health and who is a full-time employee.

2. At present the medical staffs, which include the attending and consulting staffs, are appointed by the deans of the two universities with the approval of the Director of Public Health, and in turn our institutions are used for the teaching of medicine in all its branches. Where universities are not available such staffs should be appointed by the Director of Public Health or the county health officer, for their ability in their particular field. Such appointments must come from the ranks of scientific medicine as we know and interpret it. If civil service status is established for the attending and consultant staffs, I would have no objection, provided the examining board had definite and high requirements and standards for the position before them, and were themselves extremely well qualified and came from the ranks of scientific medicine. The question of compensation or salary for such staffs is a controversial one, but my opinion has been decisive that they should serve without salary since there is always to be found devoted physicians to serve well the indigent ill. The resident staff, however, should be full-time adequately trained and paid and be responsible for out-patient activities, if any. All paid staffs of our institutions are likewise selected on the recommendations of the two deans of the two universities with the approval of the Director of Public Health.

3. No case is accepted for county institutions caring for the indigent unless it has gone through social service and no case is accepted without such investigation except on actual emergency and then on approval of the Director of Public Health.

4. The standards of social service investigations have been agreed to by the social service agencies of the city and county of San Francisco and are substantially as follows:

A social service division working under the Director of Public Health controls admissions. On application of a patient for admission a complete investigation is made to determine his eligibility for care. The social investigation includes a statement that the patient is in need of specific medical care, and cannot provide that care without depriving his legal dependents of the necessities of life. A bank authorization is also signed by the applicant and a report secured of any deposits he may have. A report is also received from the Assessor's office regarding any property he may have. Medical necessity for hospital care is determined by the admitting physician of the hospital.

Nonresident patients are admitted in emergency and given emergency care only. Accident cases that are admitted as emergency are immediately investigated and transferred to other hospitals as soon as condition permits such transfer after they are found able to pay. Such cases are billed at the per capita cost, rate set by resolution of the Board of Supervisors each year. All accident cases are billed on the expectation of possible payment. These bills are subject to cancellation by the controller. Where a patient or his responsible relatives under the state law are able to pay some part of their hospital cost, yet unable to meet the expense of a clinic rate hospital in the community, such adjustment is made at the time of admission by the Social Service Division. Where it is found that a patient has died in the hospital leaving an estate a "Creditor's Claim" is filed on behalf of the city and county.

In conclusion, the public fully realizes that no county hospital could render any scientific medical service to any patient as such without the aid and advice of the well trained physician, for the physician is the pivot around which revolves all service to patients. This statement must not be regarded as a threat to strike against this service for the ill, for the tenets of our profession forbid this, but how far the physician will go in taking the popularly designed so-called "walk" is not known to the writer. To open county hospitals for pay, part-pay patients, or to those patients subject to political favoritism, would be such an impossible situation and so detrimental to the interests of the indigent ill for whom county hospitals were originally erected and maintained that the medical profession would be called upon to take drastic and decisive action. Scientific medicine must not only face the situation of opposition to opening of county hospitals to all types of patients, but must take constructive steps to prepare proper facilities for medical care of the under-privileged and deserving group in which the hospital and the physician will serve them with credit and benefit to all concerned.

Sincerely,

J. C. Geiger, M. D.,
Director.

Concerning corporate practice of medicine: Recent Appellate Court decision.

June 30, 1936.

Re: Corporate Practice of Medicine: *Benjamin Franklin Life Assurance Company* vs. *Mitchell, Insurance Commissioner,* 85 C. A. D. 1058.

To the Editor:—The above entitled case was decided by the District Court of Appeal for the Second Appellate District on June 18, 1936. The general principle involved is the same as that involved in the case of Pacific Employers Insurance Company vs. Carpenter, 83 C. A. D. 916, with which you are familiar. However, the particular type of insurance policy which the Benjamin Franklin Life Assurance Company proposed to issue was somewhat different in its provisions from the policy concerned in the Pacific Employers Insurance Company case.

Although the result reached by the District Court of Appeal in the Benjamin Franklin case is the same as the result reached in the Pacific Employers case, it is worthy of note that the differences in the two types of policy were sufficient to cause one of the three judges in Benjamin Franklin Life Assurance Company vs. Mitchell to reach the conclusion that the issuance by that company of its proposed policy would not involve the corporate practice of medicine.

Stated as briefly as possible, the facts involved in the Benjamin Franklin case are as follows: The insurance company submitted to E. Forrest Mitchell, then insurance commissioner of the State of California, for his approval a form of insurance policy which provided for "indemnity against loss by reason of medical and hospital expenses occasioned by disease or injury suffered by the insured." The application form and the policy form provided in effect that each year all of the policyholders should elect a committee known as the "Policyholders' Committee of the Company," which committee should select physicians, hospitals, pharmacies, x-ray laboratories, etc. The physicians selected by the committee would be the only physicians from whom policyholders would be authorized to secure medical services under the policy. If a policyholder selected a physician on his own account, other than a physician approved by the policyholders' committee "all right to reimbursement for the expenses of any services for any condition arising out of or in connection with such treatment or care shall be forfeited hereunder."

The application for a policy contained a provision by which the policyholder appointed the policyholders' committee of the company his attorneys in fact and proxies for a period of seven years to represent the policyholder and to vote for him at all regular and special meetings of policyholders, including those meetings at which the committee itself should be elected. It seems rather obvious that the intent of the Benjamin Franklin Life Assurance Company was to control the personnel of the so-called "policyholders' committee."

Two of the three justices of the District Court of Appeal held that the foregoing insurance policy was fundamentally the same as the policy involved in Pacific Employers Insurance Company vs. Carpenter, that is to say, that it contemplated the corporate practice of medicine by the insurance company and that therefore the insurance commissioner did not err in refusing to approve the policy form.

The Benjamin Franklin Life Assurance Company argued that its policy was entirely different from the policy concerned in the Pacific Employers case because of the fact that policyholders, through a committee, selected their own physicians and because the company "does not undertake or agree to furnish any medical or other services to its members, nor does it undertake or agree to employ anyone to furnish such services, nor does it undertake or agree to pay to any person compensation who may furnish medical or other services." To this argument two out of the three justices replied:

> "This is literally true, but that which the company as such cannot do lawfully, it *requires* its members, by means of a contract with such members as individuals, to accomplish for it through the medium of a so-called 'Policyholders' Committee,' the creation of which is evidently provided for in the by-laws of the company. It should be noted, however, that the so-called Policyholders' Committee is not a committee of the policyholders but a committee *of the company*. The selection and designation of doctors by said Policyholders' Committee is, therefore, after all, but a selection and designation by the company. The creation of the committee is not a voluntary contribution of the members for mutual benefit, but is a condition contained in the policy at the time of the sale thereof. The company thereby undertakes to do indirectly what it cannot lawfully do directly."

The insurance company also argued that it proposed to do nothing more than has been done for the last eighty years or so by fraternal orders, lodges, religious organizations, benevolent associations, hospitals, hospital associations, labor unions and other employee associations which have been engaged in collecting periodic dues from their members for the purpose of furnishing them medical services to be rendered by doctors employed by such organizations on a salary basis and who are selected not by the patient but by the organization. The majority of the court stated that the Benjamin Franklin Life Assurance Company "is primarily engaged in the sale of medical service—by whatever name it may be called—sold through the medium of insurance. None of the features that are prominently characteristic of the above mentioned benevolent societies are included in the insurance company's so-called 'mutual association.'" Evidently the justices consider that with respect to the corporate practice of medicine there is a distinction between corporations operating for profit and non-profit organizations.

I believe that this case is of great importance. Considering the two cases (Pacific Employers Insurance Company vs. Carpenter and Benjamin Franklin Life Assurance Company vs. Mitchell) together, it seems rather clear that the Appellate Courts of this state have closed both the front door and the back door to the practice of medicine by corporations organized for profit.

We will watch the proceedings to see whether a hearing is applied for and granted by the Supreme Court.

Very truly yours,
Hartley F. Peart.

Concerning present-day plumbing equipment and need of engineering survey.

AMERICAN MEDICAL ASSOCIATION
Bureau of Health and Public Instruction
535 North Dearborn Street, Chicago

July 8, 1936.

Dear Doctor Kress:

Attached are some resolutions passed by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, which were adopted at the meeting of that committee in St. Louis, February, 1936.

In view of the potential importance of this problem, the publication of the resolutions or editorial comment thereon, or both, would be appreciated.

Very truly yours,
W. W. Bauer, M. D.

* * *

Resolution Adopted by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, June, 1936

Whereas, At the annual meeting of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association held at St. Louis, Mo., February 25, 1936, a presentation was made by Major Joel I. Connolly, of the Chicago Board of Health, relating to possible health hazards in apparently modern plumbing installations in public buildings, and

Whereas, It was manifest in the said presentation that plumbing fixtures which have been generally regarded as safe and sanitary in design may in fact constitute a real and serious health hazard by reason of the danger of back siphonage and contamination of water supply mains, and

Whereas, The probability exists that such apparently modern, safe and sanitary plumbing installations may exist in numerous school buildings in the United States, and

Whereas, The existence of such apparently safe, modern and sanitary plumbing installations and reliance upon them brings about a sense of false security, therefore, be it

Resolved, By the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association that this committee apprehends the possibility of danger to the health of school children from apparently safe, modern and sanitary plumbing installations in school buildings, and be it further

Resolved, That the said Joint Committee earnestly recommends to all school boards and school executives that surveys be instituted by competent engineers to ascertain whether or not the danger of back siphonage and consequent pollution of water supply mains exist in plumbing installations within their jurisdictions, and that such surveys be followed by prompt corrective measures, and be it further

Resolved, That these resolutions be offered for publication to all journals dealing with public health, health education and general education.

Concerning article on Harrison Narcotic Law. (See editorial comment on page 115, and U. S. District Court decision on page 164.

Los Angeles, July 16, 1936.

To the Editor:—I am mailing to you today a copy of the decision handed down by Federal Judge Yankwich in the case against me by the United States for violation of the Harrison Narcotic Act.

This decision should be of interest to every physician in the United States, as it clarifies the question as to who are to determine whether patients are pathologic: narcotic enforcement or physicians?

The indictments were filed against me because I dared to . . .

This fight has cost me a loss of time, money, practice and possibly reputation, and I feel that my defense should have been financed by the Los Angeles County Medical Society, as it was really a test case.

With kind regards, I am

Sincerely yours,
719 South Catalina Street. E. H. Anthony.

Concerning five-year nursing course.

June 23, 1936.

Dear Doctor Kress:

Enclosed find copy of an opinion dated June 19, No. 10632, from the office of the attorney general, in reference to the inquiry regarding the five-year nursing course.

Very truly yours,

W. M. Dickie, M. D.,

Director, California Department of Public Health.

* * *

State of California
Legal Department

San Francisco, June 19, 1936.

Hon. Walter M. Dickie,
Director, Department of Public Health,
313 State Building,
San Francisco, California.

Dear Sir:

I have your communication in which you state as follows:

> "Certain universities of this state are giving a five-year nursing course. They establish a definite curriculum for such courses, which curriculum commences upon matriculation in the university. At the conclusion of the courses diplomas and degrees are awarded to those satisfactorily completing the same.
>
> "Both universities require the matriculate to spend the first portion of each course on the university campus proper on the study of the basic sciences and the theory of nursing, and the last two years at the hospitals conducted by the respective institutions located elsewhere than at the campus. In such hospitals, practical teaching is provided as the concluding phase of the course curriculum.
>
> "A student at one of the universities is required to spend a portion of the third and fourth year of the university course on the university campus, and a portion of the course at the hospital, while the other university requires students to spend the first three years on the campus and the last two years at the hospital."

You ask if students registered before September 15, 1935, in the nursing courses given by such universities come within that portion of Section 4 of the Nurses' Registration Act (as amended in 1935) which permits applicants for certificates as registered nurses to qualify for examinations where they have had not less than twenty-eight months' instructions as required in said Act or whether such students must now complete a course of instruction of the character specified in said Act covering a period of not less than thirty-six months, as required of all applicants since the effective date of the 1935 amendment.

Your department has heretofore been advised that, if a nursing school gave a course of instruction approved by the board and as required by the law and the regulations promulgated by the Board of Public Health, it would constitute "an accredited school of nursing," as such expression is used in said Act. (Our opinion No. 5598, rendered to you under date of April 29, 1926.)

The Nurses' Registration Act now requires an accredited school of nursing to give a course of instruction in theoretical teaching and practical work, covering not less than thirty-six months. Prior to the 1935 amendment to Section 4, an equivalent course of only twenty-eight months was required.

By the use of the conjunction "and," it would appear that the legislature intended such practical and theoretical work to cover the entire required period.

Particularly would this seem to be the case in the light of the preliminary language of Section 4, which requires applicants for examination to have not less than the required minimum instruction (either twenty-eight or thirty-six months) "in the actual care of medical, surgical, obstetrical patients and sick children."

This law was enacted in 1913 and contemporaneous regulations promulgated by the State Board of Public Health indicate that department's view of the law to be the same as is herein set forth. Requirement II, Section D, Subdivision 5 of Requirements of Accredited Schools of Nursing provides:

> "Students must be under instruction immediately on entrance to school. Instruction in the preparatory period shall be completed before the student begins the work of the next period. Students shall be on duty in the hospital for not more than four hours daily during the preparatory period of four months."

If you determine, in applying the legislative yardsticks referred to, that students registered in a nursing course in said universities before September 15, 1935, matriculated in "an accredited nursing school," as in said Act defined, it must follow that they come within the twenty-eight months' period of training which was referred to in the section before its amendment.

You further ask whether a student could qualify as a twenty-eight months' applicant for examination, which student, prior to September 15, 1935, had matriculated in a university giving a course of instruction of the character described by you, but who had not by said date completed that portion of the course given on the campus.

The answer to the first question makes unnecessary the answer to the second.

Very truly yours,

U. S. Webb,
Attorney-General.

By Lionel Browne,
Deputy.

SPECIAL ARTICLES

STANDARDS SET BY SOUTHERN CALIFORNIA SEWAGE TREATMENT PLANTS *

Southern California has inaugurated several procedures in both water treatment and sewage treatment which are new, at least in California. For example, there is the color problem in the deep wells at Wilmington, which is dealt with most successfully by an original scheme of color removal, involving prechlorination, ferric chlorid precipitation and rapid sand filtration. The American States Water Service Company has made varied, ingenious and successful use of sand and carbon filters, and of super and dechlorination of well waters in the Culver City-Lennox district where extremely troublesome fungus growths and hydrogen sulphid have come on as water tables lowered. Beverly Hills has set a record for ornateness and completeness of two water filtration and softening plants dealing with a similar problem and with hardness and addition. Imperial Valley should also be mentioned for at least two daring and quite successful water filtration plants dealing with the highly turbid Colorado River water. And of course the standards of safety and laboratory control of water supplies are especially high in the south, thanks to the several full time health departments and extent of chlorination of water supplies. No one place in California has approached Los Angeles in the perfection of water chlorination and laboratory control of the system.

In the field of sewage disposal, a number of devices and schemes got their introduction here. For example, the joint handling of sewage disposal on a large scale, such that four sewage treatment works serve some thirty-four cities; in Los Angeles the first use of fine sewage screens and the first use of incineration for the screenings; the development of two-stage sludge digestion by Los Angeles County sanitation districts; the largest instances of the application of chlorin in arresting odor production in sewers, by these same districts and by the Orange County cities; at Newport the first application of chlorinated iron for odor control; and at Whittier, the first use of preaeration in odor control. For over ten years the Pasadena sewage treatment plant has been known throughout the country as a proving ground of several new ideas in sewage treatment, including sludge conditioning and filtering, reclamation of sludge for fertilizer by kiln drying, grease removal by aeration and more recently, the only large scale heat exchange incinerator in the country for destroying the odors in the kiln gases.

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* By C. G. Gillespie, Chief, Bureau of Sanitary Engineering, Berkeley.

Prepared for eighth annual session, Institute of Government, University of Southern California, June 15-19, 1936.

In a sense, southern California has shown a conspicuous alertness in the field of sanitation and health protection and there are some definite trends or standards in such matters as the large amount of laboratory control of water supplies, perfection of water chlorination, cleanliness of mountain streams, cleanliness of beaches, odor control in sewers and sewage treatment, and great activity in building sewerage works. In the last twenty years thirty-three high grade plants have been built in the south out of ninety in the state. These thirty-three plants serve forty-seven places, or about half the cities in the state having high grade sewage works. Thirty-seven "lower grade" plants have been built in the south, and close to one hundred elsewhere in the state. But these thirty-seven plants serve fifty-two places. The south has been particularly active in establishing new sewer systems. Sixty-one new sewer systems have gone in since 1915, contrasted with eighty-two for the rest of the state.

There is an unmistaken sensitiveness to sewage and sewage pollution, particularly within the reaches of the metropolitan area of Los Angeles, including Orange County and the mountains and beaches, perhaps because the same people flock to them for outdoor recreation. In the outlying counties of the south this same degree of interest is not so noticeable and, as elsewhere in the state, there is more of a tendency for people to become adjusted to matters of sewage disposal, and to live in peace with conditions, which in the metropolitan district have repeatedly led to fierce conflicts. For example, there were the sewer systems in Beverly Hills and Hollywood, now history; the sewer farm proposed for Anaheim, which was blocked by the incorporation of Stanton, a place that had no other earthly excuse for incorporation; similarly, the incorporation of West Covina and later the annexation of more territory to block the city of Covina in not one, but two sewage disposal projects; the incorporation of Monterey Park to block a sewer farm for Pasadena in the Monterey Park hills; later, the complaint of some 6,000 people in Alhambra against the sludge disposal at the then new activated sludge plant of Pasadena; the simultaneous nuisances from the various sewer farms of the Orange County cities which caused them to join in an outfall to the ocean; the blocking at every turn of local sewage disposal for Compton, Watts and Huntington Park, and which finally culminated in the White Point outfall to the ocean. However, the new sector of conflict then lay around San Pedro for many years. There were similar experiences in Glendale, Burbank, and in the beach cities from Hermosa to Santa Monica. The final answer was sewerage to the Los Angeles city system.

Just why this Los Angeles area should be so universally sewered and at the same time be so violently opposed to sewage disposal, forms an interesting subject upon which to muse. I have explained it all to my own satisfaction as the product of the boom days with skyrocketing of land values for subdivision and the tremendous influx of eastern and midwest people, naturally imbued with high ideas for better homes and better cities than those they had left behind. As a result, no subdivision could succeed without a sewer system and yet no subdivision could succeed with a sewage disposal plant next door. It made a difficult problem. Since subdivision was just around the corner for every square foot of land, it made sewage disposal almost impossible, both at inland plants and even at seaboard. Gradually plans have been perfected for handling the sewage of almost all of the metropolitan area in and around Los Angeles through outfalls to the ocean, and the processing of the sewage has been improved. Nearly ten million dollars are being expended for sewage treatment along the southern California coast in the interest of beach cleanliness. I believe the same higher standards of sewerage and sewage disposal should be anticipated in any area to which there is a strong tide of urban migration.

It may be questioned whether the present advances have strictly the fixedness implied by the word "standards." Looking back over the years, the efforts and advances seem more like the sorties of troops seeking to penetrate the enemy lines, first here, then there.

The first sewage treatment methods were septic tanks and sewer farms. Then two-story Imhoff tanks replaced the one-story septic tank idea. Ocean outfalls, with or without treatment tanks, replaced sewer farms wherever possible. Odors from the sewage treatment at these waterfront plants started a run on fine screens. Then as fine screens proved disappointing in the matter of odor prevention and failed to remove grease, or even all the solids, a few places went in for very long outfalls to permit ocean disposal of raw sewage. Structural difficulties with some of the outfalls, sentimental objection to the disposal of raw sewage in the ocean and an increasing premium placed on beaches, free even of the suspicion of a sewer, turned attention to the use of more inland sloughs and harbors, or to short ocean outfalls preceded by complete sewage treatment. Successful odor control at these plants was, of course, at the heart of this idea since adequate isolation was and is almost impossible. As noted elsewhere, the sorties into odor control are especially numerous.

The problem of unsightly and more or less odorous sludge beds at these ocean front locations first argued for greenhouse drying and more recently for digesting the sludge, then disposing of it through ocean outfalls under night time and other favorable conditions, so as to prevent its return to shore.

Since the bulk of the unsolved sewage disposal in the south is along the seacoast, where conditions in each place are much the same and extremely exacting, the effort should be to settle on the few guiding principles that would make sewer systems possible and sewage disposal tenable. Present features that seem to me to have permanent worth are: Centralizing plants to maximum degree; securing the best isolation of plant and outfall that is possible in each case; use of settling tanks and sludge digestion in each case; use of outfalls carefully engineered for foundation and stability of the entire line against most critical surf and ground swells, and designed to be immune against plugging by sand and to be of such additional length as may be needed for safe disposal of sludge and effluent so as to prevent any conspicuous sewage field and sewage contamination on shore. Chlorination to enhance the reputations for safety of the beaches is indicated, and also use of proven odor control measures in these plants. It must be set down that the beaches in name and in fact must be kept clean. The principal present sortieing will be into sound engineering of the outfall structures. The cities must devote their best talent without skimping on this cost, either in the preliminary surveys or in the actual construction.

Inland, the pattern of sewage disposal will probably continue along its present course with sewer farming the rule, accompanied by high grade plants in critical neighborhoods, and cheaper plants elsewhere.

Much debate as to method and place of sewage disposal will probably continue in the back country of the metropolitan area, which seems too far from the ocean for use of the county sanitary districts system with its ocean outfall. However, the State Board of Public Health, after many bitter hearings, still feels that such cities should stretch a point to finance connection in the centralized system. If they do not do this and resort to local disposal, the burden is heavy upon them to build and maintain as a pattern, odor free, high grade sewage treatment plants in the safest locations attainable. Along with this idea should go the procurement of enough land to ease the constant necessity for almost perfect odor control. Any odor control that is that severe is bound to require constant attendance of a high order and withal it may not be as dependable or as wise an investment as longer outfalls or even for more land for better isolation.

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. IX, No. 8, August, 1911

From Some Editorial Notes:

The American Medical Association Meeting.—The recent meeting of the American Medical Association in Los Angeles was a great success. And first let us extend to our colleagues in the South the sincerest congratulations and compliments upon the way in which they entertained the Association and cared for the comfort and the pleasure of all who attended the meeting. Especially to the Committee on Arrangements all credit and our thanks are due; every smallest detail had been thought of and arranged for the convenience of the visitor; there were no words but words of praise and astonishment, and our Eastern friends have gone away with a high opinion of California hospitality. . . .

* * *

Public Health.—The House of Delegates, at the Los Angeles session of the American Medical Association, passed a resolution commending the new Owen bill, Senate No. 1. This bill is a great improvement over the previous one introduced by Mr. Owen, and in all probability it, or a bill somewhat similar to it, will eventually be passed by the Congress. . . .

From an article on "Nasal Plastic, with Free Transplantation of Bone" by L. Eloesser, M. D., San Francisco.

Plastic surgery has, in the last few years, again begun to come into its own. The extension of our knowledge of the healing and of the growth of tissues, better insight into the relations of cell life to its environment, and the progress of constructive surgery that the last decade has brought have begun to bear fruit, and men are again beginning to push forward along the paths first opened by Dieffenbach, Nelaton, Langenbeck, and their compeers—paths where work had almost ceased these fifty years. . . .

From an article on "Intestinal Indigestion in Adults" by E. Schmoll, M. D., and Walter C. Alvarez, M. D., San Francisco.

For many years now, physiologists have been pointing out that the most powerful and varied ferments are those poured into the small intestine; that its absorbing surface is the largest part of the tract, and that intestinal digestion and absorption must be, if anything, more important than that which takes place in the stomach. When we remember, however, how slowly advances in the cognate sciences make their impress upon general medicine, it is not so surprising that we have to search carefully even in our latest books for any mention of intestinal digestion and its disturbances. . . .

From an article on "Dermatitis Venenata from Proprietary Hair Dye" by Ernest Dwight Chipman, M. D., San Francisco.

The frequent occurrence of a certain form of dermatitis having special characteristics and due to the use of a proprietary hair dye seems to call for further comment, even though similar cases have been previously reported. . . .

From an article on "The Early Diagnosis and the Prophylaxis of the Toxemia of Pregnancy" by Titian Coffey, M. D., Los Angeles.

The purpose of this paper is twofold: First, to show that the toxemia of pregnancy can be recognized early,

(Continued in Front Advertising Section, Page 14)

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† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By Charles B. Pinkham, M.D.
Secretary-Treasurer

BOARD PROCEEDINGS

At a regular meeting of the Board of Medical Examiners held in Native Sons Hall, San Francisco, July 6 to 9, inclusive, approximately 172 applicants wrote the examination, the larger proportion being graduates of medical colleges. There were also chiropodists and drugless practitioners.

The following changes were made in the status of licentiates of the Board of Medical Examiners:

Bayless, H. Gordon, Los Angeles. Cited on account of narcotic dereliction, was, on July 8, 1936, placed on probation for a period of five years, during which time he shall not have or apply for a narcotic permit or have narcotics in his possession. (Previous entry June, 1934.)

Belyea, John H., M. D., Los Molinos. Cited on charges of narcotic dereliction. License to practice suspended July 8, 1936, for a period of one year.

Coltrin, Francis D., M. D., Fullerton. Cited on the record of conviction of performing an illegal operation. License revoked July 8, 1936. (Previous entries June, 1925; April, May, June, August and November, 1935; May, 1936.)

Cruice, Leman Dow, M. D., La Mesa. His license to practice as a physician and surgeon, revoked July 12, 1934, was restored on July 6, 1936, and he was placed on probation for a period of five years, without permission to have or use narcotics in his practice. (Previous entry March, July and August, 1934.)

Gardner, Philip E., drugless practitioner, Los Angeles. Cited based upon aiding and abetting an unlicensed practitioner, was, on July 8, 1936, placed on probation for a period of five years.

Kay, Milton M., M. D., Shafter. Cited on narcotic dereliction, was, on July 8, 1936, placed on probation for a period of five years without narcotic possession or privileges. (Previous entry March, 1936.)

Kinsley, William L., M. D., San Diego. License was revoked February 4, 1931; restored July 6, 1936, and he was placed on probation for a period of five years without narcotic privileges. (Previous entries December, 1926; February, June, September, 1931; February, 1932.)

MacCracken, William B., M. D., Berkeley. License revoked July 8, 1936, based upon alleged illegal operation activities.

Olberg, Frederick H. C., M. D., Redding. Cited on alleged narcotic dereliction. Placed on probation July 8, 1936, for a period of five years without narcotic possession or privileges.

Payton, William B., M. D., Riverside. Cited for narcotic dereliction. Was on July 8, 1936, placed on probation for a period of five years without narcotic possession or privileges. (Previous entry, January, 1936.)

Rhodes, John McDonald, licensed chiropodist, Los Angeles. Cited on charges of practicing beyond the limitation of his certificate, was on July 7, 1936, placed on probation for a period of five years.

News

"The University of California officially confirmed today the retirement this year of Dr. Langley Porter, head of the University's Medical School. Doctor Porter has reached the retirement age. He is at present on a month's vacation. Dr. McKim Marriott, Dean of the Medical School of Washington University, St. Louis, has been selected to succeed Doctor Porter. Doctor Marriott will take his chair here at the beginning of the next university term." (San Francisco *News*, June 18, 1936.)

(Continued in Front Advertising Section, Page 15)

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† The office addresses of the California State Board of Medical Examiners are printed in the rostor on advertising page 6.

Baxter presents the
DOUBLE SIZE VACOLITER

The Vacoliter Family

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BAXTER has again cooperated by introducing the 2000 cc. size, in response to the requests for a larger Vacoliter by institutions and by physicians prescribing doses larger than 1000 cc. of intravenous solutions. The Double Size Vacoliter (2000 cc.) offers not only greater convenience for physician and nurse, but also an appreciable saving in solution cost for hospital and patient.

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Choice open air bungalows providing every comfort, at rates ranging from $25 per week up, including medical service, general nursing, laboratory examinations, ordinary medicines and pneumothorax treatment. A special ward rate of $18 a week is maintained for selected cases presenting a favorable prognosis.

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A small select sanatorium, administering to those who desire the utmost in scientific study and medical care. An ideal place for those who appreciate beautiful surroundings and a healthful, invigorating atmosphere.

Located in the foothills, six miles east of San Jose, overlooking the beautiful Santa Clara Valley. Days are temperate, nights definitely cool. Elevation 1,000 feet. All private rooms.

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Regular clinical reports sent to referring physicians

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BUFORD H. WARDRIP, M. D
MEDICAL DIRECTOR
Telephone MAYFAIR 321

(Continued from Page 30)

The Milbank Creamery Corporation, Milbank, S. D., called up to answer for an illegal shipment of butter, pleaded guilty and was fined $50. A portion of the butter shipped by this concern was found to contain mold and nondescript dirt, and the remainder of the shipment was below the legal standard for butterfat.

Other terminations of cases involving foods are reported as follows: L. Demartini Company, San Francisco, Calif., and Meyer Joe Laff, Los Angeles, Calif., moldy and wormy walnut meats, fines of $100 and $200, respectively; Uddo-Taormina Corporation, and Anthony A. Taormina, Donna, Texas, canned tomato paste containing mold, fines of $100 against each defendant (the corporation and its plant manager); Minster Canneries, Inc., Minster, Ohio, tomato puree containing mold, fine $25 and costs; Sterling H. Nelson Company, Salt Lake City, Utah, cabbage and cauliflower bearing poisonous spray residues, fine $26; Louis Markham, Des Moines, Iowa, potatoes in sacks represented as containing 100 pounds each, but in fact short of that amount, fine $10; and Western Macaroni Manufacturing Company, Salt Lake City, Utah, macaroni, spaghetti and similar products bearing no net weight statement and containing yellow coloring matter, fine $33.

The fine against the Feeders Supply and Manufacturing Company, Kansas City, Mo., reported by the Food and Drug Administration as $400, was reduced to $100 by the court when defense motion for a new trial was denied in the latter part of May.

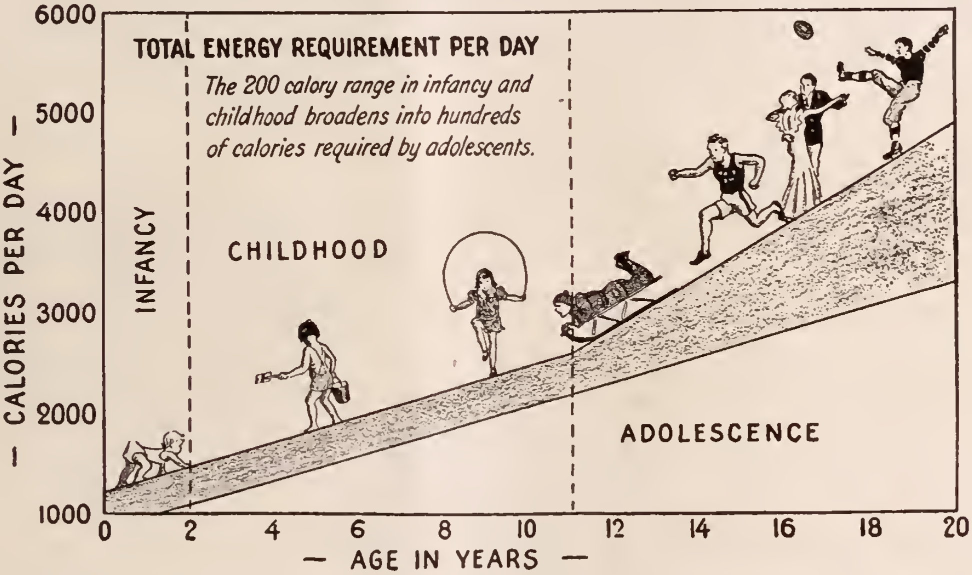
In Federal District Court for the Southern District of New York, the Tilden Company, New Lebanon, N. Y., was fined $4,000 on June 30, the Administration reports. The fine, one of the largest ever imposed under the Federal Food and Drugs Act, was the penalty for a series of interstate shipments of pharma-

(Continued on Page 37)

ADOLESCENT EXHAUSTION

relieved by

CALORIES *NOT* REST



NORMAL ADOLESCENT boys and girls frequently complain of fatigue. They feel weak and irritable; they show a diminished ability to concentrate; they are disinclined to work; they are physically inefficient.

Some of these symptoms are physiological manifestations of adolescent development. But on careful study many young folks do not consume enough food to provide them with the enormous energy requirements necessary during this transitional period. The symptoms are the consequence of undernutrition.

The graph reveals the sudden rise in caloric requirement during adolescence. Three hurried meals are usually insufficient to provide the tremendous caloric needs. Accessory meals, mid-morning and mid-afternoon, in certain instances, may be prescribed with advantage. And Karo added to foods and fluids can increase calories as needed. A tablespoon of Karo yields 60 calories. It consists of palatable dextrins, maltose and dextrose (with a small percentage of sucrose added for flavor).

Karo is well-tolerated, highly digestible, not readily fermentable, effectively utilized and inexpensive.

Corn Products Consulting Service for Physicians is available for further clinical information regarding Karo. Please Address: Corn Products Sales Company, Dept. SJ8, 17 Battery Place, New York City.

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Not a hospital or a sanitarium, but a delightful All-the-Year Resort located in the foothills six miles from San Bernardino, elevation 2,000 feet, with every facility for rest and recreation. Equipped with a complete Medical Department, including fully equipped Laboratory, Diet Kitchen, Physio- and Hydrotherapy departments, under the direction of a graduate M. D. Rheumatic allied disorders are benefited by the Natural Arsenical Steam Caves and Radio-active Arsenical Mud Baths.

Arrowhead Springs is not competitive, but supplementary, to the needs of the medical profession. The management extends a cordial invitation to the medical profession to visit ARROWHEAD SPRINGS whenever possible.

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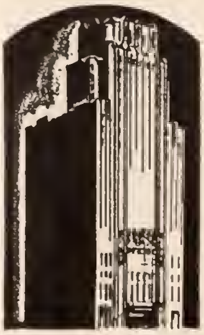

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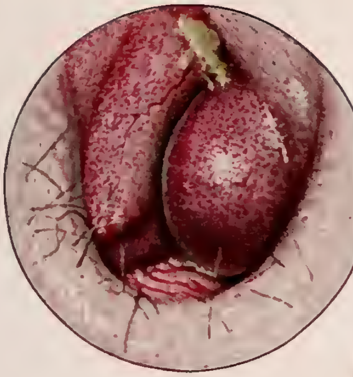

FIG. 1. Nov. 27. Nose in unshrunken state after 14 days of spraying twice daily with ephedrine, 1% in oil. Mucosa engorged, bluish, turgid and irritated; inferior turbinate blocking nostril. Marked tolerance to treatment had developed.

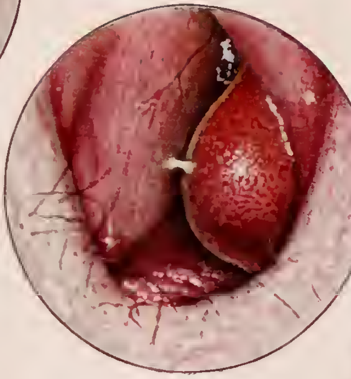

FIG. 2. Dec. 13. Nose in unshrunken state after 16 days treatment with Benzedrine Inhaler, three times daily. Engorgement reduced, tone good, irritation relieved. Note absence of atony.

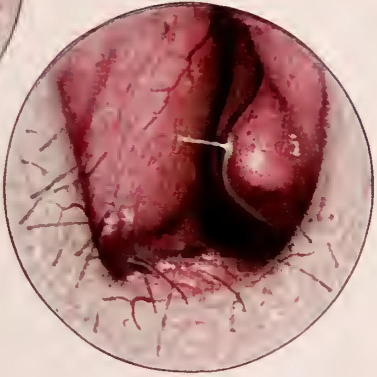

FIG. 3. Dec. 13. Nose in shrunken state seven minutes after application of Benzedrine Inhaler. High degree of shrinkage indicates no tolerance even after continued use.

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(Continued from Page 34)

ceutical preparations found to vary markedly from the established legal standards and from their purported composition.

Two other cases involving substandard pharmaceuticals were terminated during June, resulting in a fine of $200 to the G. W. Carnrick Company, Newark, N. J., and one of $50 to the Cheplin Biological Laboratories, Inc., Syracuse, N. Y. In Cleveland, Ohio, a federal district judge overruled a demurrer to an information charging violation of the Food and Drugs Act in the shipment of a product labeled "Epsom Salt Compound Tablets." The manufacturer—Strong, Cobb & Co.—contended that the word "compound" in the name of the drug was a sufficient notification of the inclusion of powerful laxatives that the Administration contends the purchaser would not expect. The predominantly active ingredients in these tablets were shown by analysis to be phenolphthalein (a coal-tar laxative) and an extract of the laxative drug aloe. Although epsom salt was in fact present, the quantity of it fell far short of even a mild dose, the product actually depending for its effect upon the drug ingredients that were neither announced on the label nor indicated in the name of the preparation.

The report of the termination of one patent medicine case concludes the June statement of prosecutions involving drugs. Henry Lutzenkirchen, trading as the Ora-Noid Company, Chicago, Ill., dropped his intended contest of the government's case against him, based on a shipment of his product "Ora-Noid," and was fined $50 and costs. "Ora-Noid," half table salt and the remainder consisting of chalk, baking soda, magnesium and potassium sulphates and phosphates, flavored with an essential oil, was offered as a "complete oral prophylactic." Claims charged by the government to be false and fraudulent included: "It keeps the gums in condition; it strengthens all the tissues of the mouth, including the tongue, the palate, the throat, and the mucous membranes on the inside of the cheeks.

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*Martenstein, H.: Syphilis Treatment: Enquiry in Five Countries, *League of Nations Quart. Bull. Health Organ* 4:129, 1935.

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Junius B. Harris (1937), Medico-Dental Building, 1127 Eleventh Street, Sacramento.

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Daniel Crosby	Chair., Com. on Hospitals, Dispensaries, Clinics
Morton R. Gibbons	Chair., Com. on Industrial Practice
E. Vincent Askey	Chair., Com. on Membership and Organization
John H. Graves	Chair., Com. on Medical Economics
Junius B. Harris	Chair., Com. on Public Policy and Legislation
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Communications for the Public Relations Department should be addressed to the Director, Frederick C. Warnshuis, M. D., Room 2004, 450 Sutter Street, San Francisco.

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Communications for the Cancer Commission should be addressed to the secretary, A. R. Kilgore, M. D., Room 2004, 450 Sutter Street, San Francisco.

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(Roster lists continued on advertising page 6)

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Assistant Secretary, Daniel Bilker, Medico-Dental Building, San Jose.

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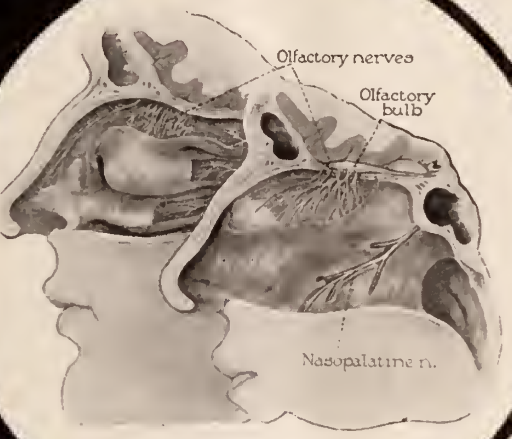

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The Institutions here listed have announcements in this issue of CALIFORNIA AND WESTERN MEDICINE. For Index, see advertising page 8.

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For Treatment of Tuberculosis
San Jose, California

CALIFORNIA SANITARIUM
For Treatment of Tuberculosis
Belmont, California

CANYON SANATORIUM
For the Treatment of Tuberculosis
Redwood City, California

COLFAX SCHOOL FOR THE TUBERCULOUS
For the Treatment of Tuberculosis
Colfax, California

COMPTON SANATORIUM AND LAS CAMPANAS HOSPITAL
Neouropsychiatric and General
Compton, California

FRANKLIN HOSPITAL
Limited General Hospital
Fourteenth and Noe Streets, San Francisco

FRENCH HOSPITAL
General Hospital
Geary at Fifth Avenue, San Francisco

GREENS' EYE HOSPITAL
Consultation, Diagnosis and Treatment of Diseases of the Eye
Bush and Octavia Streets, San Francisco

LAS ENCINAS SANITARIUM
Nervous and General Diseases
Las Encinas, Pasadena, California

LIVERMORE SANITARIUM
Nervous and General Diseases
Livermore, California

OAKS SANITARIUM
For Treatment of Tuberculosis
Los Gatos, California

POTTENGER SANATORIUM AND CLINIC
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Limited General Hospital
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ST. LUKE'S HOSPITAL
Limited General Hospital
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They Satisfy
..all you could ask for

Made by Liggett & Myers Tobacco Company—*and you can depend on a Liggett & Myers product*

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BOOK REVIEWS

Books received for review are placed in the Library of the California Medical Association, in its central office at San Francisco. Book reviews are written by the Association Secretary.

BOOKS RECEIVED

Toxicology or the Effects of Poisons. By Frank P. Underhill, Ph. D., Late Professor of Pharmacology and Toxicology, School of Medicine, Yale University. Thoroughly revised by Theodore Koppanyi, Ph. D., Professor of Pharmacology and Materia Medica, Georgetown University, School of Medicine. Third Edition. Cloth. Pp. 325. Price, $2.50. Philadelphia: P. Blakiston's Son & Co., Inc., 1936.

Endocrinology in Modern Practice. By William Wolf. M. D., M. S., Ph. D. Cloth. Pp. 1018, with 252 illustrations. Price, $10 net. Philadelphia: W. B. Saunders Company, 1936.

Theory and Practice of Psychiatry. By William S. Sadler, M. D., Chief Psychiatrist and Director, the Chicago Institute of Research and Diagnosis; Consulting Psychiatrist to Columbus Hospital; Fellow of the American Psychiatric Association; Member of the American Psychopathological Association. A Psychiatric Textbook for Neuropsychiatric specialists and general practitioners of medicine. A reference handbook for psychologists, sociologists, pastors, and other professional readers. Cloth. Pp. 1231. Price, $10. St. Louis: The C. V. Mosby Company, 1936.

Vascular Disorders of the Limbs. Described for Practitioners and Students. By Sir Thomas Lewis, C. B. E., F. R. S., M. D., D. Sc., LL. D., F. R. C. P., Physician in Charge of Department of Clinical Research, University College Hospital, London; Honorary Consulting Physician to the Ministry of Pensions; Consulting Physician, City of London Hospital; Fellow of University College, London. Cloth. Pp. 111. Price, $2. New York: The Macmillan Company, 1936.

Physician, Pastor, and Patient. Problems in Pastoral Medicine. By George W. Jacoby, M. D., Past President of the American Neurological Association and the New York Neurological Society. Cloth. Pp. 390, illustrated. Price, $3.50. New York: Paul B. Hoeber, Inc., 1936.

Williams' Obstetrics. A Textbook for the Use of Students and Practitioners. By Henricus J. Stander, M. D., F. A. C. S., Professor of Obstetrics and Gynecology, Cornell University Medical College; Obstetrician and Gynecologist-in-Chief, New York Hospital, and Director of the Lying-In Hospital, New York City. Seventh Edition. A revision and enlargement of the text originally written by J. Whitridge Williams. Cloth. Pp. 1269. Price, $10. New York: D. Appleton-Century Company, 1936.

A Diabetic Manual for Practitioners and Patients. By Edward L. Bortz, A. B., M. D., F. A. C. P., Associate Professor of Medicine, Graduate School of Medicine, Uni-

(Continued on Next Page)

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versity of Pennsylvania; Chief of Medical Service, B., the Lankenau Hospital, Philadelphia; Assistant Editor, The Cyclopedia of Medicine. With a Foreword by George Morris Piersol, B. S., M. D., F. A. C. P., Professor of Medicine, Graduate School of Medicine, University of Pennsylvania; Editor in Chief, The Cyclopedia of Medicine. Cloth. Pp. 222, illustrated. Philadelphia: F. A. Davis Company, 1936.

United States Naval Medical Bulletin. Vol. XXXIV, July, 1936, No. 3. Published Quarterly for the Information of the Medical Department of the Navy. Issued by the Bureau of Medicine and Surgery, Navy Department, Division of Publications, Commander Louis H. Roddis, Medical Corps, U. S. Navy, in Charge. Paper. Pp. 285-429. Price, 25 cents. Washington: United States Government Printing Office, 1936.

Tissue Immunity. By Reuben L. Kahn, M. S., D. Sc., University of Michigan, Ann Arbor. Cloth. Pp. 707. Price, $7.50. Springfield: Charles C. Thomas, 1936.

On the Disturbance of the Circulation in Spinal Anesthesia. An Experimental Study. By Oscar O. Schuberth. Paper. Pp. 77. Stockholm: Kungl. Boktryckeriet. P. A. Norstedt & Soner, 1936.

BOOK REVIEWS

Endocrinology in Modern Practice. By William Wolf, M. D., M. S., Ph. D. Pp. 1018, with 252 illustrations. Cloth. Price, $10 net. Philadelphia and London: W. B. Saunders Company, 1936.

This new text provides the useful knowledge of clinical endocrinology. Anatomy, histology, embryology, physiology, and biology of each gland is given. Disease entities are described. Diagnosis and treatment are described in detail.

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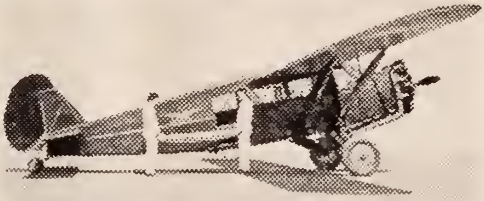

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The author has succeeded in covering his subject in a manner that will enable the practitioner to gain sound information upon endocrinology and enable him to apply intelligent advice in his daily practice. This text must find its place in the library of every progressive physician and surgeon.

Williams' Obstetrics. By H. J. Stander, M. D., Cornell University. Cloth. Pp. 1269. Seventh edition. Price, $10. D. Appleton Century Company, New York.

The original sixth edition text was completed and published by Doctor Williams in 1931. The present editor has brought this standard up to date and causes it to remain as a recognized authority and dependable consultant.

Toxicology—The Effects of Poisons. By Frank P. Underhill, Ph. D., Yale University. Third edition. Cloth. Pp. 325. Price, $2.50. P. Blakiston's Sons & Company.

This is a short concise description of the effects of poisons upon organisms. It will be found to be a dependable reference guide. Symptoms are given and the treatment is in accord with present-day knowledge.

Vascular Disorders of the Limbs. By Sir Thomas Lewis, University College Hospital, London. Cloth. Pp. 107. Price, $2. The Macmillan Company, New York.

A general description of our present information upon circulatory disturbances of the extremities. Nothing new is contributed.

Theory and Practice of Psychiatry. William S. Sadler, M. D. Cloth. Pp. 1224. Price, $10. C. V. Mosby Company, St. Louis.

The author presents his thirty years of experience in the field of psychiatry. This book should be helpful to the medical practitioner. It is most interestingly written. The field is well covered and consistent with the accepted principles. Medical men in general, as well as in special fields, may well devote some of their time to the reading and study of this text. They will be more competent practitioners, having done so.

Treatment in General Practice. Articles republished from the British Medical Journal. Cloth. Pp. 250. Price, $3.50. Paul B. Hoeber, Inc., New York.

This is an excellent idea. The contents consist of certain outstanding articles that appeared in the British Medical Journal from December, 1934, to July, 1935. They cover a limited but an important field of general medical practice, and should be helpful to the working doctor. The following are general subjects presented by thirty-five articles: respiratory tract, specific fevers, and cardiovascular diseases. The authors are recognized British clinicians.

Medical science never stays still. New knowledge must be applied at the bedside. The compilation will be helpful because it is practical and because it teaches and does not speculate. Practitioners will find it most helpful.

Human Genetics and Its Social Import. By S. J. Holmes, Professor of Zoölogy, University of California. Cloth. Pp. 414. Price, $3.50. McGray-Hill Book Company, 330 West Forty-second Street, New York.

Sociology and biology are interrelated very closely. It is upon that premise that the author writes the first edition of this text. Biological and sociological principles are well presented.

This presentation commands interest by reason of the discussion and references being imparted in logical sequence. With the knowledge acquired from careful reading of this text, the thinking individual is better able to contribute to the upbuilding of a sounder, healthier, social structure.

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Heart Disease and Tuberculosis. By S. Adolphus Knopf, M. D. Pp. 105. Cloth. Price, $1.25. Livingston Press, Livingston, New York.

This is a brief recapitulation of important matters related to these two conditions. Medical, surgical, and social aspects are reviewed. Prophylactic and curative measures are cited. This monograph will be very helpful to all practitioners.

Disability Evaluation: The Principle of Treatment of Compensable Injuries. By Earl D. McBride, M. D. Pp. 623, with 364 illustrations. Cloth. Price, $8. J. B. Lippincott Company.

An entirely new book on a problem that has ever been a difficult one to all concerned with industrial surgery and disabilities arising from industrial and civil accidents. Following an accidental injury there is always a dispute between interested parties as to the extent, permanency and extent of functional damage, and the degree of incapacity sustained. The opinion appraisal has been more or less guesswork and has been influenced, sorry to say, by the employer or employees' quest, inspired by the counsel of both parties.

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California Medical Association Cancer Commission Committee Studies. Paper. Price, 75 cents. Pp. 129. San Francisco: California Medical Association, 1936.

The California medical profession has been exceedingly active in the last few years in conducting effective educational campaigns among both the lay public and the profession. In 1931, the House of Delegates of the California Medical Association created a Cancer Commission as one of the prominent commissions of the Association. This small volume is the report for 1936. The presentation takes the form of a series of committee reports on various types of neoplasms made by groups of specialists. It is obvious from the technical form in which these papers are written that they are intended primarily for the medical profession. Different committees report on tumors from the various regions or organs, and the Radiological Committee makes some general recommendations as to the use and limitations of radiation therapy. Contradictions that still exist on many of the questions discussed in this interesting and valuable pamphlet are frankly indicated. Owing to the limitation of space, the discussion has, obviously, to be rather dogmatic, but where there are differences of opinion, attention is usually called to this fact. For example (on page 59) the Committee on Genito-Urinary Tumors states, as regards kidney neoplasms, that there is no value in preoperative treatment and recommends postoperative irradiation, but a footnote calls attention to the fact that there is a well-marked division of opinion on the subject and that some believe that preoperative treatment only delays surgery. One member is quoted as saying, "We have ample evidence of the value of preoperative radiation. . . . It is not unusual to see an operable malignancy entirely done away with so that the operation itself becomes unnecessary." However, the committee adds that "it is hoped that in time sufficient statistical end-result evidence will be available to settle these questions." It is well to acknowledge that there are

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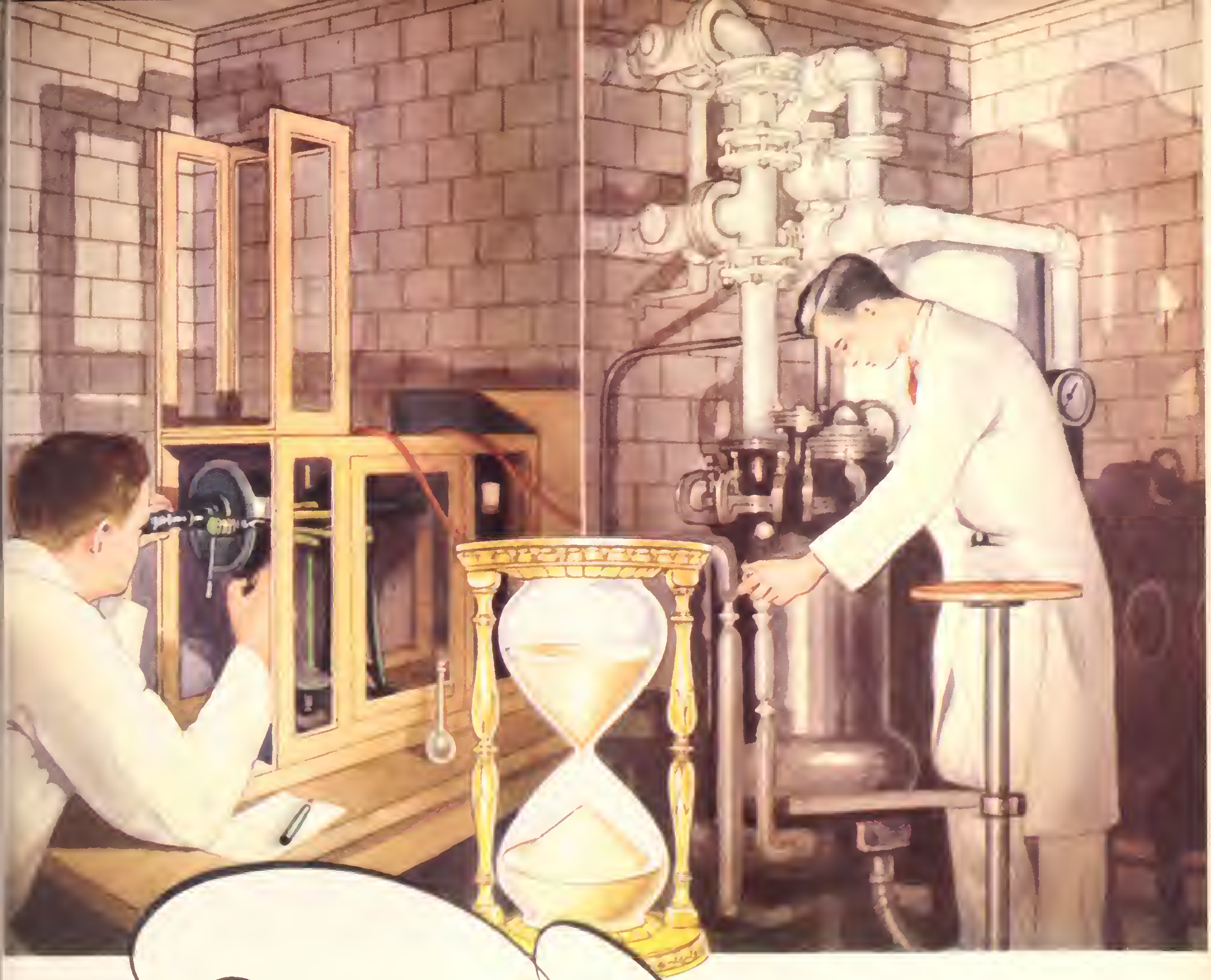

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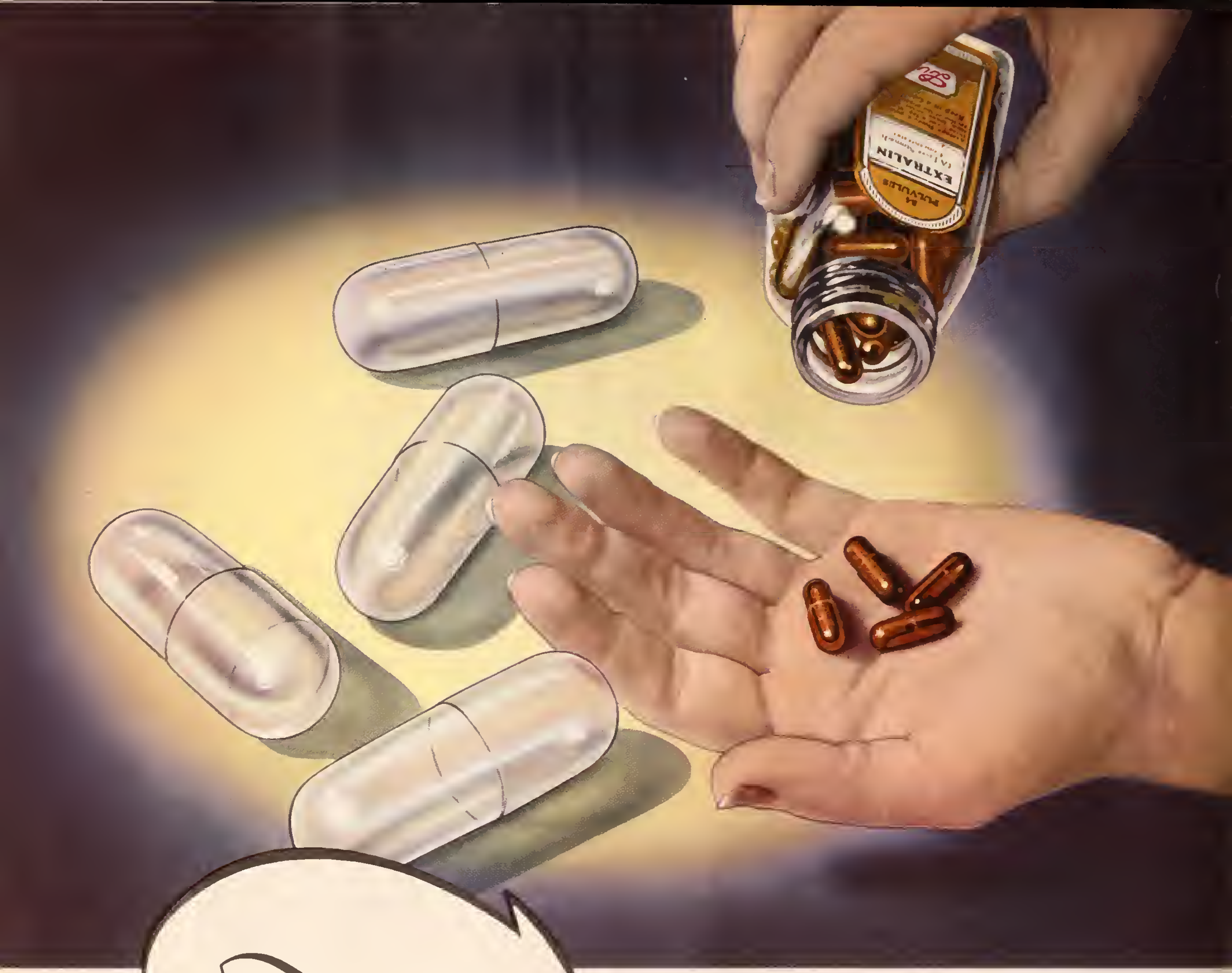

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The concentration of antianemic material in Pulvules 'Extralin' (Liver-Stomach Concentrate, Lilly) is suggested by comparing these capsules. The raw or cooked liver necessary to equal the blood regenerating effect of the Pulvules 'Extralin' would fill the larger capsules.

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BOOK REVIEWS

(Continued from Page 15)

still many problems in the therapy of cancer which are still not solved and that any dogmatism on the subject is absurd.

This valuable little book should have a very wide circulation among the profession outside California as well as in it, and other state medical organizations might well learn a lesson from what has been done in California.

The Eye and Its Diseases. By eighty-two international authorities. Edited by Conrad Berens, M. D., Ophthalmic Surgeon, Pathologist and Director of Research, New York Eye and Ear Infirmary; Special Consulting Ophthalmologist, Woman's Hospital; Consulting Ophthalmologist, Veterans' Administration Facility, New York; Lecturer in Ophthalmology, New York Eye and Ear Infirmary; Member of American Board of Ophthalmology; Member of the Society of Surgeons of Paris; Lieutenant-Colonel, Medical Reserve Corps, United States Army. Pp. 1254, with 436 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1936. Cloth. Price, $12 net.

This book represents the efforts of eighty-two international authorities, each an investigator in his special field. The text is complete and thorough. General practitioners will find it valuable.

TWENTY-FIVE YEARS AGO

(Continued from Text Page 304)

From an article "The Treatment of Tick in Childhood" by E. C. Fleischner, M.D., San Francisco, from the Department of Children's Diseases, Cooper Medical College, San Francisco.

In this modern era of civilization when intensity rather than moderation characterizes the method whereby we lead our daily lives, even the infant is caught in the vortex

(Continued on Next Page)

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TWENTY-FIVE YEARS AGO

(Continued from Preceding Page)

of excitement and competition, and the result is a nervous system ruined in its developmental period, producing the neurotic child so commonly seen among all classes of humanity. . . .

California Association of Medical Milk Commissions: Proceedings of the Annual Meeting, held in Santa Barbara, April 18, 1911.—The meeting was called to order by Dr. T. C. McCleave at 2 p. m.

On motion, duly seconded, Dr. T. C. McCleave was appointed permanent chairman and Dr. M. E. Jaffa temporary secretary.

Doctor McCleave explained the purpose of the meeting to be the formation of a State Association by federation of existing milk commissions.

On motion of Doctor Kress, it was voted to form such an association.

On motion, duly seconded, a committee on organization was appointed, consisting of Doctors T. C. McCleave, G. S. Baker, and G. H. Kress. . . .

The report submitted by Doctor Kress for the said federation of milk commissions was as follows:

1. The name of the organization shall be the California State Association of Medical Milk Commissions. . . .

From an article on "Bovine Tuberculosis and Its Relation to the Public Health" by George S. Baker, Bureau of Animal Industry.

Whatever relationship there is between tuberculosis of the bovine and the public health exists from the fact that we are milk drinkers and meat eaters. Under our present civilization, the dairy cow plays a wonderfully important part in the development of the human family. . . .

BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 304)

at 1115 McAllister. There they arrested Mr. and Mrs. Walter Swindell. In an adjoining flat at 1117 McAllister Street, the officers took into custody Mrs. Gertrude Bergeron, who was booked as a vagrant. Then they proceeded to 431 Ashbury Street, where they arrested Mrs. Minerva Geddes, Mrs. Rudolph Zoffell, William Zoffell, Raymond Zoffell, and Mrs. Raymond Brandt. Simultaneously with the arrest here, Inspector Harry Husted of the homicide squad reported he had taken into custody in San Diego two women alleged to be implicated in the state-wide ring. They were Laura Miner and Nedra Arden. Both were booked at San Diego en route here. Husted said the pair were caught in the act of performing an illegal operation. The arrests here were part of a police drive against an illegal operation ring growing out of the death of Mrs. Florence Alves, thirty-six, Redwood City, mother of two children. A sister of the dead woman testified during a coroner's inquest she had taken her sister to the 1115 McAllister Street address to arrange for the operation that assertedly caused her death. . . ." (San Francisco *Examiner*, July 17, 1936.) Records of the Board of Medical Examiners indicate the premises at 1115 McAllister Street were for several years occupied by Eugene F. West, M. D., deceased, who was frequently

(Continued on Page 22)

Adequate treatment of Pernicious Anemia

WITH A MINIMUM OF INCONVENIENCE TO THE PATIENT MAY BE OBTAINED BY THE USE OF

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Lederle

THE CHOICE OF A LIVER EXTRACT for the treatment of pernicious anemia should depend primarily on the potency of the extract. Since treatment must be continued at definite intervals, it is also important to consider the discomfort caused by the injection of the extract.

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Available only in boxes of 3 vials—each containing, in a volume of one cubic centimeter, active substance obtained from 100 grams of liver.

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Ipral Sodium (sodium ethylisopropylbarbiturate) is a safe, effective sedative which is readily absorbed and rapidly eliminated. With proper attention to the dosage, undesirable cumulative effects may be avoided. No untoward organic or systemic effects have been observed when given in therapeutic doses. Ipral Sodium is supplied in ¾-gr. tablets as a sedative; in 2-gr. tablets as sedative and hypnotic; and in 4-gr. tablets for pre-anesthetic medication. Ipral Sodium 2 gr. is also available in capsule form —in bottles of 100 and 1000.

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Tablets Ipral Aminopyrine (2 gr. Ipral, 2.33 gr. Aminopyrine Squibb) provide both analgesic and sedative actions.

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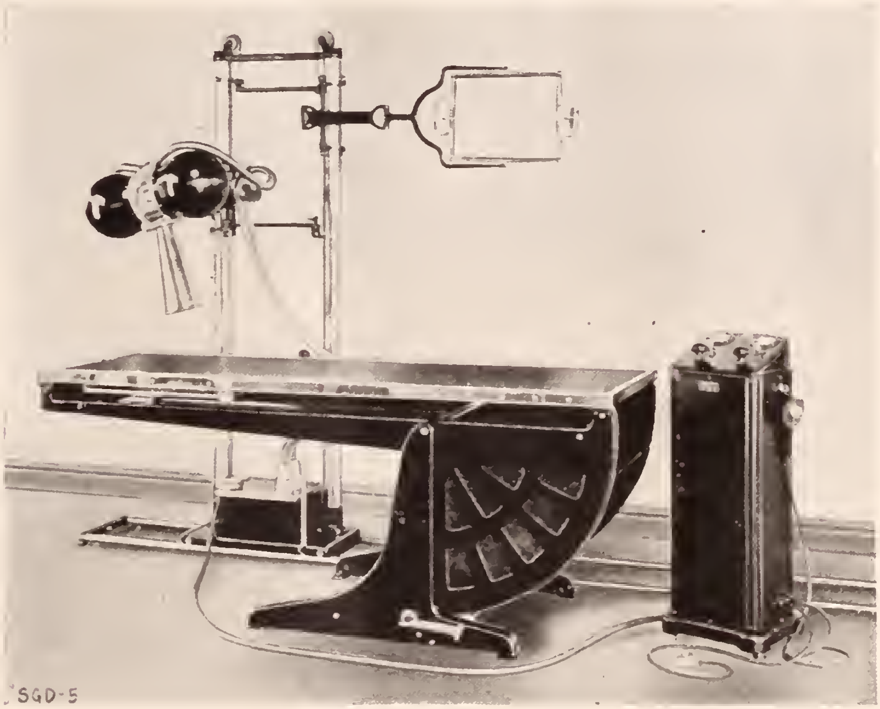

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 18)

featured in the news in connection with asserted criminal operations performed on the premises.

"Three San Joseans, assertedly members of a coastwide abortion ring, today pleaded innocent to charges of performing illegal operations at a hearing held in San Francisco, according to an Associated Press dispatch. The three were L. J. Giubbini, D. C., long sought 'doctor,' his nurse, Violetta Pellegrini, and Marvin Raithal, contact man. . . ." (San Jose *News*, July 9, 1936.) Previous entry, August, 1936.

"Assistant United States Attorney G. B. Hjelm announced today he has received authority from the Attorney-General and the Secretary of the Treasury to dismiss a narcotics violation indictment against Dr. Theodore Snypp of Auburn, the Placer County Health Officer. . . . Under a plan agreed upon between Government and defendant, Doctor Snypp permanently will surrender his license to prescribe narcotics. The indictment charges Doctor Snypp fraudulently prescribed for narcotics users. Hjelm said leniency was favored because of the doctor's age and his good reputation in the community. Doctor Snypp is 75." (Sacramento *Bee*, July 14, 1936.)

"Trial of Dr. John C. Coleman, forty, negro physician of Oakland, on charges of violating the Harrison Narcotic Act started before Federal Judge A. F. St. Sure today. . . . Coleman is at liberty on $5,000 bond. . . ." (Oakland *Tribune*, July 29, 1936.)

"Police and county officers here were warned against the operation of a gang of four swindlers posing as eye

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specialists who have victimized several aged persons in southern and central California in recent weeks. . . . Belief that the swindlers are headed into northern California was expressed by Los Angeles authorities, who stated the four had been traced into several rural communities in the central valley areas." (Santa Rosa *Press-Democrat*, July 8, 1936.)

Ten persons awaiting trial here October 13 in connection with a coast-wide illegal operations ring received another blow from the law yesterday. They were indicted by the Grand Jury in Los Angeles for asserted operations there and in Hollywood and Long Beach during the past three years, according to Associated Press. . . . The ten indicted, as announced by Vernon Ferguson, Deputy District Attorney in Los Angeles, were: R. L. Rankin, Medical Acceptance Corporation head; Doctors G. E. Watts, Valentine St. John, and H. L. Houston; William A. Byrne, former State Medical Board investigator; John A. Creeth, G. O. Shinn, and three nurses, Bessie McCarthy, Grace Cole, and Lillian Wilson. In addition to them, Miss Jessie Radcliffe, receptionist, was indicted, Ferguson said. (San Francisco *Chronicle*, August 12, 1936.)

"Dr. H. C. Wallace, negro, a West Fresno doctor, today was arrested by Sergeant Rose and State Narcotic Inspectors Perry and Blonder on a charge of violating the State Narcotic Act. He was released on a $500 bond. . . . The doctor was arrested in 1928 on a charge of violation of the Federal Narcotic Act, and was given two years' probation. His right to issue narcotic prescriptions was revoked." (Press dispatch dated Fresno, August 7, 1936, printed in the San Francisco *Chronicle* (Fresno edition), August 8, 1936.)

"Prosecution of Dr. Malcolm Hoffman, physician and surgeon of 1735 Broadway, charged with administering a beating to a young San Francisco nurse was delayed yesterday when a request for a continuance was granted by Municipal Judge Daniel S. O'Brien. The young physician was charged with battery by his former fiancee, Miss Margaret Hecker, 767 Eleventh Avenue. Miss Hecker claimed she was taken in a car by Doctor Hoffman and two other men to Golden Gate Park, where the physician struck her three times while the other men looked on. They then left her there, she said. . . . Doctor Hoffman is also scheduled to appear August 19 for arraignment on the charge of performing an illegal operation. The physician was arrested by Inspector George Engler after a raid on an alleged abortion institute at 431 Ashbury Street." (San Francisco *Examiner*, August 13, 1936.)

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(Continued on Page 26)

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Life is not as gentle to a tiny baby as it seems to be.

He comes into this world, never having breathed, never having eaten, never having digested food. Almost immediately, his little body must adjust itself to these vital functions.

If he is like most babies, he doubles his weight in the first few months; *triples* it in the first year. Every part of his body must make adjustments to accommodate this proportionately tremendous growth.

A new baby encounters disease-producing germs for the first time, and must build up resistance against them. If he does become ill, he is without the power to tell what the trouble is or where it lies. And when upset, he frequently is further endangered by the well-meant, but often harmful, suggestions of relatives and friends who "know *just* what to do."

Yes, infancy is so hazardous a period that, last year, the number of deaths among babies under one year of age was more than *three times* the number of deaths from automobile accidents.

The doctor is the one person equipped to give parents competent guidance through this dangerous period of a baby's life.

The doctor who sees the baby regularly can often detect sickness or physical trouble *in its early stages.* He can prescribe correct diet, proper hours of sleep, healthful and sensible handling of the habit problem. And he can start an important immunization program, to prevent such diseases as smallpox, diptheria, and whooping cough.

Enlisting the doctor's help—entrusting growth, diet, and general health to his supervision—is one of the most sensible precautions parents can take in those dangerous days of the child's first year.

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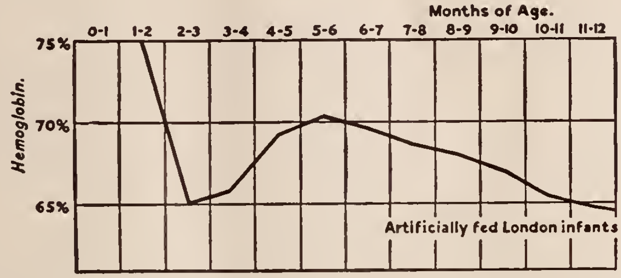
Nutritional Anemia in Infants



Hemoglobin level in the blood of infants of various ages. Note fall in hemoglobin, which is closely parallel to that of diminishing iron reserve in liver of average infant. Chart adapted from Mackay. It is possible to increase significantly the iron intake of the bottle-fed from birth by feeding Dextri-Maltose With Vitamin B in the milk formula. After the third month Pablum offers substantial amounts of iron for both breast- and bottle-fed babies.

Reasons for Early Pablum Feedings

1. The iron stored in the infant's liver at birth is rapidly depleted during the first months of life. (Mackay,[1] Elvehjem.[2])

2. During this period the infant's diet contains very little iron—1.44 mg. per day from the average bottle formulae of 20 ounces, or possibly 1.7 mg. per day from 28 ounces of breast milk. (Holt.[3])

For these reasons, and also because of the low hemoglobin values so frequent among pregnant and nursing mothers (Coons,[4] Galloway[5]), the pediatric trend is constantly toward the addition of iron-containing foods at an earlier age, as early as the third or fourth month. (Blatt,[6] Glazier,[7] Lynch[8].)

The Choice of the Iron-Containing Food

1. Many foods reputed to be high in iron actually add very few milligrams to the diet because much of the iron is lost in cooking or because the amount fed is necessarily small or because the food has a high percentage of water. Strained spinach, for instance, contains only 1 to 1.4 mg. of iron per 100 gm. (Bridges.[9])

2. To be effective, food iron should be in soluble form. Some foods fairly high in total iron are low in soluble iron. (Summerfeldt.[10])

3. **Pablum is high both in total iron (30 mg. per 100 gm.) and soluble iron (7.8 mg. per 100 gm.) and can be fed in significant amounts without digestive upsets as early as the third month, before the initial store of iron in the liver is depleted. Pablum also forms an iron-valuable addition to the diet of pregnant and nursing mothers.**

Pablum (Mead's Cereal thoroughly cooked and dried) consists of wheatmeal, oatmeal, cornmeal, wheat embryo, brewers' yeast, alfalfa leaf, beef bone, iron salt and sodium chloride.

[1-10] Bibliography on request.

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 23)

thy Nelson, who died in a private hospital after an illegal operation had been performed, it was learned late Tuesday afternoon. The prominent medical man was released on his own recognizance, and it is believed that he will be formally booked for the charge in the near future. . . . Records reveal the death of another woman allegedly from an abortive operation last week, as police began an investigation of Mrs. Dorothy Nelson's death at a private hospital. She had been placed in the hospital at the request of Dr. H. H. Towles, prominent physician, who reported the case to the police just before she died. . . ." (Los Angeles *Illustrated Reflector,* July 15, 1936.)

"Extradition papers were prepared in the District Attorney's office here today for the return of Matthew O.

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Wilkinson from Milwaukee to Sacramento to face a charge of swindling about $10,000 from a Sacramento County rancher in a fake eye-cure scheme. The news of Wilkinson's arrest received here in a telegram late Saturday from Milwaukee postal authorities ended a five-year search by the sheriff's office. The case is being handled by Deputy Sheriff Ogle. The victims of the racket are Charles and Gottfried Zeh and Johanna Zeh of Antelope. Nearly five years ago they paid Wilkinson, known to them as Dr. J. P. Billingsley, Seattle eye specialist, about $10,000 to remove a cataract in Miss Zeh's eye. Wilkinson, after performing an operation on Miss Zeh's eye, sold her a 'radium belt' for eye treatment. Ogle said it merely was a leather contraption with a small battery attached which produced a mild electric shock. The Zehs paid $986 in cash for the operation and put up certified checks totaling $9,000 as deposits on the belt. About three years ago a Robert Cavenagh, identified by Miss Zeh as the man who took her the belt, was sentenced to a year in the city jail here as an accomplice in the scheme. Cavenagh was arrested in Los Angeles, and simultaneously Wilkinson was held in San Diego on a misdemeanor charge. Before Miss Zeh could reach San Diego to identify him, he escaped, forfeiting his bail. . . ." (Sacramento *Bee,* August 3, 1936.) An article dealing with the eyesight swindlers was published in the 1932 annual report of the Board of Medical Examiners, published in our 1933 directory.

A signed statement made to Inspector Joseph J. McCullough of the New York Board of Medical Examiners by Alfred Storm (New York County Penitentiary, K-64314, July 17, 1936), recently arrested in New York City on a charge of violation of the Medical Practice Act, revealed Storm as the dapper little Frenchman, also known as Peter O. LeRoux, who obtained employment in several hospitals throughout the United States, using the name and credentials of Alfred A. Hesse. Among the

(Continued on Next Page)

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★ *Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245*
Laryngoscope, 1935, XLV, 149-154
N. Y. State Jour. Med., 1935, 35, No. 11, 590
Arch. Otolaryngology, Mar. 1936, Vol. 23, No. 3, 306-309

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

institutions where he served as a physician was the San Joaquin County General Hospital. A history of this impostor appeared in the 1932 annual report of the Board of Medical Examiners, published in our 1933 directory.

Information recently came to the Board of Medical Examiners that an individual named "Dr." Holsted Hanson, assertedly claiming to be a retired surgeon, a Ph. D., a medical expert, etc., also claiming that an enormous fortune was coming to him from Denmark, recently located in San Diego. Our informant states that said individual has no college degree of any sort, is not a bacteriologist, and has not at any time been connected with the State Board of Health of New York. Holsted Hanson was featured in the Buffalo (New York) *Evening News*, Thursday, December 22, 1932, in an article headed "Holsted Hanson, Once Model for Marchand, in Jail Again—Self-Styled Bacteriologist Must Serve Six Months . . ." also in the Buffalo (New York) *Evening News*, Friday, June 23, 1933, in an article headed "Hanson's Activities Again Scrutinized—State Inspector Wants Picture Showing Swindle Posing in Operating Room." The Board of Medical Examiners would appreciate any information regarding Holsted Hanson.

The New American Medical Directory.—The fourteenth edition of the American Medical Directory has been completed and copies are now available for general distribution.

The directory, with nearly twenty-five hundred pages, is a vast storehouse of information. It contains not only the most complete list available of the physicians of the United States and its dependencies and of Canada, but much additional data which hospitals, libraries and various other

APPROVED CLINICAL PATHOLOGISTS

American Medical Association Essentials for An Approved Clinical Pathologist

An approved clinical pathologist should be a licensed graduate of medicine. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry, and other allied subjects for at least three years, and he should be reasonably familiar with the manifestations of disease in the body. The director of a clinical laboratory shall be on full time or have definite hours of attendance, devoting the major part of his time to this specialty. A clinical laboratory is an institution organized for the practical application of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source, and progress of disease in the human body.

The following Clinical Pathologists directing private laboratories in California are approved by the Council on Medical Education and Hospitals of the American Medical Association:

Clinical Laboratory of Drs. W. V. Brem, A. H. Zeiler, Roy W. Hammack and G. D. Maner, 657 So. Westlake Avenue, Los Angeles, California.

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institutions, as well as individuals, will find useful and readily available. The directory is the only nation-wide register of physicians in which the extensive data on medical education, licensure, and society affiliations have been verified.

The 1936 edition contains 183,312 names, or 4,796 more than were in the previous edition issued in 1934. The names of 13,157 physicians have been added and 7,684 names have been removed because of death. More than 70,000 changes of address have been made, in addition to thousands of changes in society affiliations, teaching positions, specialties, and office hours.

In this edition, thirty-two states show an increase in the number of physicians; New York leads the list with 1,201, followed by California (369), Pennsylvania (281), New Jersey (262), and Massachusetts (249). A slight decrease in the number of physicians is shown in Missouri, Georgia, Kentucky, Tennessee, Oklahoma, Alabama, Indiana, South Dakota, Maine, Vermont, Mississippi, and New Hampshire. When the thousands of changes of location are analyzed they seem to show a noticeable migration of physicians to the larger towns in the south central states, a trend that was previously present also in some other sections of the country.

The first section of 221 pages in the new directory includes the constitution and by-laws of the American Medical Association, the Principles of Medical Ethics, and a list of meeting places of the annual sessions of the Association since the first one in 1847, with the names of the president installed during each meeting. In this section also are lists of the hospitals that are approved for intern training, the medical libraries, the medical journals published in the United States, Canada, the Philippine Islands and Puerto Rico, the names of medical officers of the various government services, the national organizations for the various specialties with the names of their members, the membership of the new examining boards for the specialties, the medical schools in the United States and Canada

(Continued on Next Page)

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(Continued from Preceding Page)

with a brief history of each, and the members of the National Board of Medical Examiners.

The second section is arranged by states. There is published under each state the Medical Practice Act, the members of the Board of Medical Examiners, members of the State Board of Health, county and city health officers, and officers of the state, district, and county medical societies. Following this is a list of 7,220 hospitals, sanatoriums and related institutions, arranged by towns, with the name, location, bed capacity, superintendent, and type of patients treated in each institution. Then, arranged by towns, comes the great list of physicians, giving the year of birth, school, year of graduation and license to practice, membership in the state society and special societies, professorships, and Fellowship in the American Medical Association. The home and office addresses and office hours also are given for physicians in towns of more than 10,000 population.

A new feature in this edition is a key letter showing that a physician has been certified as a specialist by an approved examining board. Several of these boards have been approved by the Council on Medical Education and Hospitals since the directory went to press. The next edition, therefore, will contain a more complete list of certified specialists. An especially interesting feature of the 1936 edition is the list of American physicians temporarily located in foreign countries.

The third section, of 525 pages, is an alphabetical index of the names of 183,312 physicians; and practically every name is followed by the name of the city and state, thus indicating where in the directory detailed information about the individual physician may be found.

The bringing to completion of the fourteenth edition of the American Medical Directory has been a monumental task, in the pursuance of which thousands of individuals, societies, licensing boards, medical colleges, and other organizations have coöperated. For their ready coöperation and assistance the American Medical Association is thankful and deeply appreciative.

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EDITOR . . . . GEORGE H. KRESS

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BUSINESS MANAGER . FREDERICK C. WARNSHUIS

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Change of Address.—Request for change of address should give both the old and the new address. No change in any address on the mailing list will be made until such change is requested by county secretaries or by the member concerned.

Responsibility for Statements and Conclusions in Original Articles.—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

Contributions—Exclusive Publication.—Articles are accepted for publication on condition that they are contributed solely to this journal.

Contributions—Length of Articles: Extra Costs.—Original articles should not exceed three and one-half pages in length. Authors who wish articles of greater length printed must pay extra costs involved. Illustrations in excess of amount allowed by the Council are also extra.

Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

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EDITORIALS†

ARE PHYSICIANS REMISS IN CIVIC RESPONSIBILITIES?

Physicians Reluctant to Become Legislators. It is to be regretted that so few physicians in the United States seek to serve their country in legislative halls. For this lack of civic interest and willingness to assume such responsibility, the medical profession is made to suffer, as witness in many commonwealths the numerous cultist examining boards, the recurring onslaughts on the standards of medical practice acts, the attacks upon legitimate public health activities, the efforts of antivivisectionists and similar well-meaning, but nothing-much-more, groups.

* * *

Next California Legislature Convenes in January, 1937.—The next California Legislature will convene in the first week of January, 1937, and we shall observe, as in years gone by, the introduction of probably five hundred or more bills, each of which, if enacted into law, may affect public health and medical practice interests. These measures, even now, are probably in their formative dress, their sponsors merely awaiting the outcome of the primary election on August 25 to determine which of the opposing candidates for each assembly and senatorial district shall be supported; so that election support then given, if coupled with victory in the final elections, in November, shall be rewarded with partisan advocacy of the proposed laws.

* * *

Medical Profession Can Take a Lesson From the Legal Profession.—As always, there will be a good representation in the legislature of the legal profession, whose younger and some older members find it worth the effort to be known as such. In addition, this year, as in the four years just passed, we may look for a rather substantial representation of citizens who are allied to some of the newer reform movements.

How beneficial, then, it would be if among the successful legislative candidates it were possible to note, as six or more assemblymen and three or more state senators, and in the federal legislative halls, as one or more congressmen from California, the names of those already honoring the medical profession!

---

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column, which follows.

* * *

Physicians Not in Active Practice Should Be More Active in Civic Matters.—Such a picture could easily be created, especially if some of the older members of the profession, whose means are such as to no longer demand their active practice, responded to the lure of civic duty and stood as candidates for these offices!

California, and other states as well, need in their legislative halls the knowledge and judgment which members of the medical profession can give, and more so than ever before in these years of social unrest.

* * *

County Medical Societies Should Also Be Alert to Civic Responsibilities. — Here and there, one is able to note signs of increased interest in matters of this kind on the part of organized medicine units. Take, for example, the action of the Board of Councilors of the Los Angeles County Medical Association in authorizing the appointment of a committee to form a class for physicians wishing to study methods of public speaking. That effort came from the experience of radio talks, it having been demonstrated that very few physicians know how to prepare and deliver an effective talk for a radio audience. The plan, for its evident value, is commended to the consideration of other component county medical societies.

* * *

Proposed Legislation to Be Studied.—As regards legislation to which the California Medical Association may give special attention in 1937, it need hardly be stated that the Council and the Committee on Public Policy and Legislation will make an earnest effort to consider most carefully all possible needs. In a general way, very little that is new is likely to be offered. If conclusions can be drawn from the experiences of former legislative sessions, it is probable that most effort will need to be directed against vicious public health legislation now in the forming, which will first come into the open at the end of January or perhaps even after the February recess.

Component county societies and individual members of the Association, therefore, are cautioned not to give endorsements or approval of legislative measures without first communicating with the Committee on Public Policy and Legislation, through the office of the Association Secretary. Embarrassing situations, and worse, will thus be avoided by observing this rule.

* * *

At the November Election, Support Only Legislative Candidates Who Hold Sound Views on Public Health. — By the time this issue of the official journal reaches its readers the primary election will have decided who are to be the opposing candidates. With that fact established, physicians, both as individuals and through their organized units, should learn the reaction of all nominees on sound public health measures, so that support in the November election may be given to the candidates who, in these matters at issue, can best serve the people.

QUALIFYING CERTIFICATE (BASIC SCIENCE) LEGISLATION

Tentative Draft of Qualifying Certificate Law Has Been Prepared.—In the last legislature, a tentative draft of a Qualifying Certificate law was introduced, more, however, to give notice that such a statute was seriously contemplated than with any thought to urge its passage. As was anticipated, the measure, in the form proposed, was generously amended in committee, where it remained until the legislature adjourned.

The Special Committee of the California Medical Association, to whose members have been delegated the study and drafting of a Qualifying Certificate law, has no intention at this time of presenting such a statute for the consideration of the 1937 California Legislature. That does not mean that other interests or individuals may not submit such a proposed law.

* * *

An Initiative Law Is Necessary. — As has been stated in the committee reports printed in the official journal, a Qualifying Certificate (Basic Science) law to be of any value in California—a state with multiple examining boards—must be made to include each of the healing-art boards already established, as well as others that may be established in the future. In view of the fact that California has three healing-art acts—the medical practice law, a legislative enactment; the osteopathic law, an initiative statute; and the chiropractic law, also an initiative measure—it is understandable why a Qualifying Certificate law must also be enacted by initiative vote of the electorate, if it is to be made to apply to the above groups. For a basic science law passed by the legislature could not be made to include either the osteopathic or chiropractic groups.

* * *

Initiative for Qualifying Certificate Law to Be Submitted in 1938.—For this reason the proposed Qualifying Certificate law must lie over for the regular state election in November, 1938. In the meantime, when opportunity arises, the advantages and need of such a law should be stressed before lay and professional groups.

It is not anticipated that the osteopathic licentiates will give serious opposition to such a measure, because that group is constantly raising its standards of admission and should have no serious objection to such a measure. It is to be hoped that the chiropractors who are licensed will also appreciate the advantages in such a law. Practitioners of all healing-art groups already licensed in California will come under the provisions of such a law, not through examination, but by registration of their certificates as licentiates. But every graduate, after the enactment of such a law, and prior to taking his healing-art examination for licensure, would be obliged to present a certificate from the Qualifying Certificate Board to show that he had successfully passed its examination.

* * *

Basic Elements of Proposed Qualifying Certificate Law.—The tentative provisions of the California Qualifying Certificate law, which has been outlined in previous issues of California and Western Medicine, have been designedly drafted in broad and liberal manner, with the basic thought in mind that it is not a quantitative amount of specified knowledge that is needed so much as that the applicant for the certificate shall have had cultural training of a certain standard, and that the examination shall be given by a liberal arts (non-healing art) board of undoubted scholastic ability and integrity, and free from all political influence. It is believed that the bill, as contemplated, will possess these requisites. Members of the profession who are interested are invited to send suggestions to the committee, whose members are listed in the Special Committees on advertising page 6 of each issue of the Journal.

"THE ATTACK ON GROUP MEDICINE"

"The Attack on Group Medicine," an Effusion by an "Advertising Man."—*The Nation*, a magazine known to a goodly number of Americans, in its issue for July 4 prints an article entitled, "The Attack on Group Medicine," by one James Rorty.

The author is not so well known as the publication for which he writes; but *The Nation*, in discussing the contributors to that number, on page 140, naïvely states:

> James Rorty concludes in this issue his series on medical politics in the United States. Formerly an advertising man, Mr. Rorty wrote the inside story of advertising in his book, "Our Master's Voice." . . .

* * *

This "Advertising Man" Thinks He Knows His Subject.—Read, now, some of the outpourings of this former advertising man who, in the language of his training, speaks dogmatically and otherwise concerning the medical profession and its constituted bodies of organization; reference to which article is made because it is an example of similar outpourings from propagandists inspired mostly by sources unknown.

The Borden Milk boycott of Chicago is dragged into the opening paragraphs, and the American Medical Association, and also its secretary, Dr. Olin West, and its journal editor, Dr. Morris Fishbein, are taken to task for not having made official pronouncements against the boycott. Read and ponder:

> Excellent! But did the American Medical Association officially and publicly repudiate the boycott at any time while it was in progress or since? It did not. Did Doctor Fishbein repudiate the boycott in the *Journal?* He did not.
>
> The plain fact is that in doing what they did the medical boycotters and slanderers were obeying the spirit, if not the letter, of policies which the American Medical Association has followed for many years—policies designed to defend and perpetuate a system of medical service and payment which is demonstrably obsolete and heartbreakingly destructive both of human health and medical idealism. Again and again, both officially and unofficially, the American Medical Association has used brass knuckles on the advocates of change in the organization of medical care wherever they showed their heads. As a result of this policy some of the best heads, both in and out of the medical profession, are bloody—but not noticeably bowed. Expulsion from his medical society, the loss of hospital and university appointments, public ostracism, and private slander—these are the penalties visited almost automatically upon nearly every doctor who attempts to rip off the nineteenth century swaddling clothes in which the rugged medical individualists would like to bind the huge potential resources of modern medicine.

Could statements such as these be clothed in sentences more ridiculous? Before Advertising Man Rorty rushed into print with such an onslaught, he might well have taken time to familiarize himself with the history of the American Medical Association and its long record of commendable service.

* * *

The Place Given to State and County Medical Associations.—Note the mental attitude of "former advertising man, Mr. Rorty," and how he vents his mind upon the constituent state associations and their component county societies:

> There is plenty of current evidence that the ruling hierarchies of the American Medical Association, including most of its state and county units, intend to obstruct and hamstring all attempts to set up voluntary group-practice and group-payment schemes of medical care, regardless of the demonstrated quality and economy of the service offered by such organizations. . . .

After commenting, too, on the Los Angeles and Dallas County Medical Societies proceedings, Mr. Rorty states that the American Medical Association Judicial Council

> . . . enunciated a new principle, now embodied in two clauses, 6 and 7, which have recently been added to the office code of ethics. Any group-practice organization is now ruled "unethical."
>
> 6. When the conditions of employment make it impossible to render adequate service to the patients.
>
> 7. When the contract, because of any of its provisions or practical results, is contrary to sound public policy.
>
> In practice this means that if the majority of the members of any county medical society decide that a clinic or group-practice organization is "against sound public policy" they can expel from their society the doctors associated with the clinic, and the Judicial Council of the American Medical Association will sustain them. What the American Medical Association is saying in effect is this: A group clinic may not solicit patients, directly or indirectly; may not underbid individual physicians to secure a contract; may not charge fees which, in the judgment of the competing individual members of the county medical society, are inadequate to secure good medical service; may not interfere with reasonable competition in a community; may not prevent free choice of a physician; may not set up conditions of employment which *in our judgment* make it impossible to render adequate service to patients. Finally, no group-practice organization may operate under a contract which because of any of its provisions or practical results is *in our judgment* contrary to sound public policy.
>
> This is the heart of the American Medical Association's 1936 policy with respect to the organization and distribution of medical care. Not even the United States Supreme Court has dared to assert such impudent claims to power over matters affecting the life and death of the American

people. True, the American Medical Association has no legal authority. It cannot prevent a physician from practicing nor can it stop a group clinic from operating. But it can and does implement its claim to authority by public excommunication and private ostracism and persecution. It has no police powers, but it can and does summon its medical squads and battalions to a holy war in defense of their own status, their own emoluments. It does this whenever the pressure of public need fires a group of progressive doctors with the determination to cast off the shackles of the American Medical Association's pocket-motivated "ethics" and attempt to give people decent medical care at a price they can afford to pay. There have been scores of such holy wars and they are all pretty much alike. Two recent examples will suffice to illustrate the customary strategy and tactics.

In similar fashion, in this "second of a series of four articles on medical politics," Layman Rorty continues on to discuss several medical-service groups which in his opinion have been unjustly disciplined by the county medical organizations of which they were members; his inference being, of course, that the members of the county societies were in each instance persecuting the offenders.

* * *

The Respective Backgrounds of Advertising Men and of Physicians.—It is not to be wondered at that a layman, with an advertising man's training and background such as that of Mr. Rorty should be unable to understand why physicians place a high value on conduct as a basis of membership in their county medical societies, and that when county society members as a whole, and almost without exception, object to a member or members inaugurating a form of medical service which somewhere in its make-up is motivated and associated with commercialism as a basic element, rather than by maintenance of high standards of professional service, these members of county societies are only giving expression to their individual selves as reflected in the aspirations that led them to enter a profession where service to human fellows, rather than acquirement of riches through trade or vocation, was to be the major element in their life careers.

* * *

The Advertising Man Needs More Training in Logic.—Mr. Rorty writes his story in first-class style—for that is what an advertising man must learn to do to emphasize the wares of his client; but he certainly draws broad and dogmatic deductions, with condemnation of almost the entire medical profession of the United States (for the American Medical Association has a membership of about 103,000 physicians), from some isolated instances which even if he were right—which we believe he is not—do not establish premises warranting such conclusions. And even if in one or two cases he were right, he might well remember the old rule in logic, not to draw general conclusions from special instances, which he seemingly has done, with literary results as noted above. Perhaps, it was the literary merit (!) that led the editors of *The Nation* to accept the article. If not that, then mayhap some of their special journalistic policies, which an inspection of their magazine quickly reveals.

ANNUAL REPORT OF THE ROCKEFELLER FOUNDATION FOR THE YEAR 1935

President Max Mason's Foreword.—Max Mason, retiring president of the Rockefeller Foundation, in the opening paragraphs of his foreword states:

> I have the honor to transmit herewith an account of the work of the Rockefeller Foundation for the period January 1, 1935 to December 31, 1935, including the reports of the secretary and the treasurer of the Foundation, the director of the International Health Division, and the directors for the Medical Sciences, the Natural Sciences, the Social Sciences, and the Humanities, and of the vice-president in charge of program in China.
>
> During the year the Foundation has continued its efforts in public health through the International Health Division. Financial assistance and the coöperation of its staff have supplemented governmental agencies in the training of public health personnel and in the control of disease, while the staff has continued its study of certain diseases in their environments, and also the laboratory research to which this study leads.

The detailed, but most modest outline of the activities of the Rockefeller Foundation for the year 1935, which follows, needed 479 pages to tell the story of altruistic and wise endeavor for betterment of the human race, to effect which this meritorious foundation stands sponsor.

* * *

How the Money Is Spent.—The funds available in the Foundation total $46,523,610.86.

Disbursements during the year amounted to $12,725,439.34. Members of the medical profession will be interested to note the nature of some of the fund allocations:

Medical sciences	$ 692,524.79
Public health	8,285.26
Nursing	511,242.73
Research programs	699,214.33

In the summary of expenditures in 1935 are mentioned activities such as:

UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS

Medical Science Education	
Cheeloo University, Tsinan, China	$ 4,168.75
China Medical Board, Inc., New York City	460,850.00
Chulalongkorn University, Bangkok, Siam	7,214.35
University of Brussels, Belgium	200,000.00
University of Colorado, School of Medicine	7,791.69
University of Montreal, Canada	12,500.00
	$ 692,524.79
Public Health Education	
Dalhousie University, Halifax, Canada	$ 8,285.26
Nursing Education, University of Toronto, Canada	8,238.18
Vanderbilt University, Nashville, Tenn.	500,000.00
Miscellaneous	3,004.55
	$ 511,242.73
Public Health	
Central Medical School for Native Medical Students, Suva, Fiji	$ 7,419.44
Regular program of the International Health Division in state and local health work, public health education, control and investigations of specific diseases	2,015,470.95
League of Nations Health Organizations, Geneva, Switzerland	105,220.56

National Health Administrations of China, Nanking schools and institutes of hygiene, and public health, Hungary, Budapest	9,804.06
Italy, Rome	10,853.93
Japan, Tokyo	27,757.64
University of Brussels, Belgium	247,118.13
	$2,443,179.62

From the above the scope and wide medical affiliations of the Foundation, exemplified in equal measure for work in social and natural sciences, and in the humanities, are easily evident.

* * *

The International Health Division.—In commenting on the work of its International Health Division, the report states:

> The dominant feature of the former world-wide program was the creation and development of technically competent local, state, and national health services. This was the outcome of the still earlier hookworm work, which led to an interest in the formation of well-rounded health departments which would include the control of hookworm disease and similar types of public health work as an integral part of their regular health-protection programs. . . .
>
> The demonstrations in which the Foundation has participated, and the ever-increasing application of present-day methods by governments have undoubtedly greatly extended the benefits of public health service, but at the same time they have brought out, as nothing else could have done, the very real limitations of existing knowledge and particularly its frequent inadequacy when applied to specific problems under special conditions. Through experience it has become apparent that the Foundation can render its greatest service in the public-health field by shifting its emphasis from the rapid and extensive application of existing knowledge to the securing of additional facts necessary to effective and economical control of disease. . . .
>
> The dominant feature of the new program is field research, through which it is hoped to arrive at the control of certain specific diseases. Among the diseases studied in 1935 yellow fever heads the list; malaria, likewise, occupies a position of major importance. Significant contributions were, however, also made in schistosomiasis, yaws, tuberculosis, undulant fever, and other diseases.
>
> The attempt is not made to engage in research on all the diseases in the field of public health. Efforts are concentrated on a limited number of clear-cut public health problems, with emphasis on the need for studies of disease in its environment and on closely related laboratory investigations, in order to define the problems with greater accuracy and to search for more effective and less expensive methods of disease control. . . .

Fifty pages are given to a sketch of activities carried on by the Division of the Medical Sciences, and the following brief excerpts will serve to indicate their nature:

> During 1935 the Rockefeller Foundation appropriated $2,733,050 for work in the field of medical science. Of this sum, $1,459,450 was contributed to projects for the advancement of psychiatry. . . . The term "psychiatry," as used here, is an inclusive one, comprising clinical psychiatry; clinical neurology; the anatomy, physiology, chemistry, pharmacology, and pathology of the nervous system; some aspects of psychology; and those phases of other branches of medicine which bear directly on the understanding of human behavior. . . .
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> * * *
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> In six institutions in the United States where circumstances are especially favorable for the development of teaching and research in psychiatry, the Foundation is co-operating in programs to improve the presentation of this subject to medical students and to bring it into closer relation with other branches of medicine. . . .
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> * * *
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> Training in psychoanalysis is of great importance to the psychiatrist, but at the present time facilities for such training are limited. To aid in extending opportunities in this field the Foundation made a grant of $100,000 to the Institute for Psychoanalysis, Chicago, payable over a three-year period, beginning October 1, 1935, to enable it to enlarge the scope of its teaching and research. . . .
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> * * *
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> In the study of mental diseases, child psychiatry is one of the basic fields to be investigated. . . .
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> * * *
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> The School of Medicine of the University of Chicago has been one of the few important medical schools of the United States without a department of psychiatry. Plans to remedy this defect have been under consideration at the University for some time. The possibility of aid for research work from the Sprague Fund has made the project especially attractive. The proposed plans are now being put into effect with the aid of a Rockefeller Foundation grant of $168,000. . . .
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> * * *
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> Of the total sum of $1,459,450 appropriated by the Foundation in 1935 for the development of psychiatry, $903,950 was provided for the advancement of research in this field. . . .
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> * * *
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> The National Hospital, Queen Square, for the Relief and Cure of Diseases of the Nervous System Including Paralysis and Epilepsy, London, received a grant of $600,000, of which half is to be used toward the cost of erecting and equipping a new building and half for the endowment of research. . . .
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> * * *
>
> A grant of $5,000 a year for a period of three years, beginning June 1, 1935, was made to Columbia University for the salary of a psychiatrist to give full time to research in the Department of the Practice of Medicine of the College of Physicians and Surgeons. . . .
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> * * *
>
> The Foundation made an appropriation of $9,050 to the University of Amsterdam toward the support of research on dementia praecox in the Neurological Clinic, under the direction of Dr. Herman de Jong, during the three-year period beginning April 1, 1935. This grant will provide the salaries of a biochemist and assistants, and certain equipment and supplies. . . .

* * *

Other Foundations Might Well Model After the Rockefeller. — The few paragraphs given above are sufficient to indicate the excellence of the major plans of the Rockefeller Foundation and the splendid and efficient manner in which work in all its departments is carried on. In these days, when so many foundations seem to be using their resources on wild-goose chases, it is reassuring to read such an account as that of the Rockefeller. Almost every page of the report is a tribute to the importance of wise and sane management in undertakings of this nature. The administrative heads of some of the other foundations, whose names have graced the pages of lay and scientific press in recent years, and given the impression of having lost their heads somewhat as they visualized their responsibilities, could study this Rockefeller report advantageously. An acceptance of its standards and methods would result in an elimination of some of the vagaries and egotisms which the directors of one or two other foundations seem unable to keep in the background. It would be well for all foundations, massive or otherwise, to keep in mind that man's world has been existing many hundreds of years, and that cultural and welfare developments have not been confined to recent times. Further, that in things closely associated with the daily lives of human beings, something more than revolutionary academic or report dissertations are necessary before the world can be changed.

This truth applies particularly to activities related to medicine, in which such amazing progress has been made in the last half century under a system which some lay theorists are insistent shall be changed to suit their views. Wherefore, as already stated, the 1935 report of the Rockefeller Foundation should be of interest to all medical men. At the next visit to your medical library, ask for the volume. It is well worth a careful inspection.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 287.

EDITORIAL COMMENT[†]

THE TECHNIQUE OF ELECTROCARDIOGRAPHY*

It had been known since 1856 that the contraction of the heart resulted in the production of an electrical current, but not until 1887 did Waller demonstrate that this current could be led off from the surface of the body and recorded. Einthoven, in 1904, was the first to perfect an instrument sufficiently sensitive to accurately follow the small, rapidly-varying heart currents, and apparatus to record them.

The earlier instruments were string galvanometers, the sensitive element being a very fine gold-plated quartz fiber suspended between the poles of a powerful electromagnet. Here the heart current, without modification, passes directly through the string and results in the deflection. Lately, instruments using vacuum tubes have been developed which greatly amplify the action current and pass it through the string of a relatively insensitive galvanometer, carrying a small mirror. Here the deflection of a reflected beam of light is photographed. In the string instruments it is the shadow of the string itself which is photographed.

The advantages and disadvantages of the two types of instruments are relative and minor. The string instruments must be more carefully handled, are operated preferably from batteries, are more easily shielded from alternating current interference, and give slightly higher complexes, mostly in the R and T waves, although it is not proven that this is a more accurate picture than that obtained with tube instruments, and the difference is usually slight. The vacuum tube instruments are more portable, usually may be run from 110-volt alternating current lines (ordinary house current), but give more trouble from A. C. base-line interference, and are more prone to have mechanical difficulties. One prime difference is the fact that the skin resistance of the patient has no effect on the vacuum type. In the string instrument it must be compensated for.

Whatever type instrument is used for the actual recording of the electrocardiogram, there are certain precautions to be observed in the preparation of the patient and the actual taking of the picture.

Preparation of Patient.—1. The patient, when he is first informed of the desirability of obtaining an electrocardiogram, should be told that the activity of his heart produces the deflection and there is no possibility of his receiving an electrical shock. This is conducive to mental rest and physical relaxation on the part of the patient, and also results in a much smoother base line on the cardiogram.

2. The patient should be given a slip by his doctor (if forms are not supplied) to take to the cardiographer, giving the age, clinical diagnosis and details as to treatment with digitalis, as minimum information necessary. These facts are of distinct aid to the cardiographer in his interpretation, since his function is more to correlate findings or suggest possibilities than to make a diagnosis (except for disturbances of rhythm).

Technique.—1. The essential conditions are to have the patient in a prone position and at rest. Dyspneic patients should be propped up with sufficient pillows to prevent respiratory embarrassment, as an absolutely horizontal position is not necessary. Just before each lead is taken, the patient should be cautioned to be absolutely quiet, but may be allowed to move or talk at other times.

2. Proper electrical connection of the patient to the apparatus must be made. The skin where the contact is to be made should be scrubbed vigorously with a towel dipped in warm salt solution. The gauze is then soaked in this solution, wrapped about the limb, and the electrode applied tightly over it. These precautions lower skin resistance and prevent skin current.

3. Lead IV connections are made by placing the right arm electrode on the anterior chest wall over the fourth left interspace, just to the left of the sternum. The left arm electrode is placed on the posterior chest wall directly opposite the other electrode. The patient is kept in the semirecum-

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[†] This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

* Articles in the Editorial Comment department in this issue, and marked with a †, belong to a series of nine papers read before a recent meeting of the San Francisco Heart Association. The series will appear in this column in succeeding numbers of CALIFORNIA AND WESTERN MEDICINE.

bent position on his left side while the lead is being taken. Lead V is the same, except that the posterior electrode is attached to the left leg. Many other variants have been described, all giving essentially the same cardiographic picture.

University of California Hospital.

John B. Lagen,
San Francisco.

INTERPRETATION OF ELECTROCARDIOGRAMS

Within recent years clinical electrocardiography has come to be more generally used, and it is accepted as an important aid in the diagnosis of cardiac disease. However, its limitations are well recognized by cardiologists. Severe heart disease may not be accompanied by electrocardiographic abnormality and, conversely, definite abnormalities frequently are not inconsistent with good cardiac function. The evaluation of the electrocardiogram, therefore, should always be made in the light of careful clinical examination, and caution should be exercised in the interpretation of electrocardiographic changes.

The electrocardiograph is frequently of great value in clarifying the presence of various arrhythmias. It is sometimes impossible, for example, to distinguish clinically between auricular fibrillation, premature auricular beats and multiple extrasystoles, and similarly, the paroxysmal tachycardias, without its aid.

The presence of myocardial disease is often disclosed when not detectable clinically. It is practically impossible to diagnose latent heart block without electrocardiographic evidence, and this is frequently so with bundle-branch or I-V block. In coronary thrombosis the tracings are often characteristic, but not always necessary to diagnose the condition clinically; on the other hand, in doubtful cases of angina pectoris, typical changes may serve to substantiate the diagnosis definitely.

The electrocardiograph may be of considerable help in the therapeutic management of the cardiac patient, and particularly in detecting the toxic effects of digitalis on the myocardium prior to their clinical manifestations. It furnishes very little information, however, concerning the presence of valvular or congenital heart disease, and then only indirectly.

To estimate accurately the significance of abnormalities in the electrocardiogram, it is essential to know certain physiological principles in regard to the origin and spread of action currents in the normal heart, and likewise to appreciate the variation in appearance and time relation that may normally occur in the complexes. The following are some of the more important criteria employed in the interpretation of electrocardiographic tracings at the University of California Hospital:

NORMAL FIGURES:

Rate 60 to 100 min.

P.R. interval—0.20 sec. or less in lead in which it is longest.

Q.R.S. interval—0.10 sec. or less in lead in which it is longest.

Axis deviation—

- Right—The main deflection of Q.R.S.$_1$ is down and of Q.R.S.$_3$ is up.
- Left—The main deflection of Q.R.S.$_1$ is up and of Q.R.S.$_3$ is down.

Voltage of Q.R.S. complex—usually over 10 mm. in lead showing the highest voltage. Deflections under 5 mm. in all leads are definitely abnormal.

Voltage of T wave—Over 1 mm.

CRITERIA OF BUNDLE-BRANCH BLOCK:

Q.R.S. interval over 0.10 sec.

Q.R.S. complex slurred or notched.

A definite axis deviation with the T wave in opposite direction from main Q.R.S. deflection (sometimes in opposite direction from the slurred limb of the Q.R.S. deflection).

FUNCTIONAL DISTURBANCES GENERALLY ASSOCIATED WITH MYOCARDIAL DAMAGE:

In the conduction system:

- Prolongation of P.R. or Q.R.S. interval (especially in the case of bundle-branch block).
- Definite slurring or notching of Q.R.S. complexes in two leads.

In the muscle:

- Low or inverted T waves (in leads other than III, and providing effects of drugs are ruled out).
- Usually in the case of certain abnormal rhythms, such as auricular fibrillation and flutter and ventricular tachycardia.
- Marked deviations of R.T. or S.T. interval from the base line.
- Deep Q$_3$ (over 25 per cent of height of largest Q.R.S. deflection).

CRITERIA FOR NORMAL LEAD IV (OR V):

P wave small, diphasic or inverted.

Q.R.S. complex diphasic with deep Q wave.

S.T. interval short, sloping into an inverted T wave.

CRITERIA FOR ABNORMAL LEAD IV (OR V):

(*a*) T wave:

1. A positive T wave.
2. A disphasic T wave taller than 2 mm.
3. A shallow broad negative T wave less than ¼ mm. high.
4. A negative T wave deeper than 9 mm.

(*b*) S.T. segment:

1. A positive S.T. segment.
2. A negative S.T. segment more than 2 mm.
3. Any negative S.T. deviation when associated with a positive T wave.

(*c*) Q.R.S. complex:

1. Slurred or notched.
2. Monophasic (absent Q wave).

Any one is considered abnormal, but a combination is of more significance.

Limited space will not permit a complete discussion and illustrations of the differentiation of arrhythmias and the more recent knowledge of evidences of myocardial damage; hence, the reader is referred to the literature on the subject.

384 Post Street.

R. D. Friedlander,
F. J. Underwood,
San Francisco.

Wisdom consists in knowing what to do. Skill consists in knowing how to do it. Virtue consists in doing.—David Starr Jordan.

ORIGINAL ARTICLES

BETTER OBSTETRICS*

By Henry A. Stephenson, M.D.
San Francisco

It has long been recognized that the maternal mortality rates in the United States have been higher than those in other civilized countries. While it is difficult to get entirely satisfactory figures for comparison, it has been shown that the mortality rate in the United States is 64 to 67 per ten thousand live births, while in Italy and Sweden it is 26 to 27. These figures represent the highest and lowest rates. It is also a fact that no appreciable improvement in our own rates has been made for several years. Among obstetricians, particularly, there has been systematic inquiry and serious thought regarding the causes for this situation. Unusual interest was aroused by the White House Conference Studies on Prenatal and Maternal Care and Child Health and Protection. That report showed that in the United States birth registration area there are annually 15,000 maternal deaths, about 86,000 stillborn children, and nearly 80,000 dying in the first two weeks of life. In trying to explain the high rate in this country, it is necessary to analyze all of the factors related both to pregnancy and parturition.

BIOLOGIC BACKGROUND OF PREGNANCY

One should consider the biologic material out of which the pregnancy originates. The habits and activities of the individual undoubtedly play an important part in the future offspring. Acute and chronic infection, and constitutional diseases existing at the time of conception cannot but play a rôle in the integrity of the ovum and fetus. Very frequently the physician has little opportunity to advise concerning the preëxisting physical status, as most patients become pregnant before the doctor is consulted.

Mothers who have babies in rapid succession or those who, as a result of frequent pregnancies, indulge in induced abortions, are often not physically fit to withstand the strain of pregnancy and labor, and are more vulnerable to infection. A more tangible group of factors, from the physician's viewpoint, includes toxemias, operations during pregnancy, hospital facilities, induction of labor, the use of analgesics and anesthetics, operative deliveries and postpartum care.

TOXEMIA

The question of toxemia has been so thoroughly discussed and kept before the profession in the past decade that little need be said here except again to urge the importance of prenatal care in the prevention and early detection of these conditions.

DELIVERY IN THE HOME AND HOSPITAL

It is essential to be certain of the facilities one has at his disposal for the care of obstetrical patients. Whether the delivery be in the home or at the hospital, the physician must satisfy himself that he has provided the best available facilities. There has been much argument regarding the relative dangers of delivery in the home and in the hospital. There are ardent supporters of each group. Kosmak showed that increased hospitalization, amounting to 65 per cent of all the deliveries in New York City in the year 1930, has a tendency to increase the amount of operative interference. Stout found, on studying a series of cases, that the incidence of infection was almost twice as great in normal women delivered in the home as in a comparative group delivered in the hospital, 8.4 to 4.6 per cent, respectively; and that there was no difference in the severity of infection in the two groups. His conclusion, then, was that the patient has a better chance of escaping infection in a modern maternity hospital than in her own home. On the other hand, Macchia reviews a thousand home cases delivered without a maternal death. Only nine of these thousand had to be removed to the hospital for delivery. It is difficult to draw definite conclusions from isolated reports such as these, but it seems certain to me that the mother is better safeguarded from obstetrical accidents and emergencies when surrounded by the facilities provided in a well-equipped maternity hospital.

ANALGESICS AND ANESTHETICS

The conduct of labor involving the use of analgesics and anesthetics is largely dependent upon the ability and training of the attendant. The widespread demand for relief from pain, and the fairly universal employment of drugs causing analgesia may increase, somewhat, the risk to both mother and baby. At present restrictions should be placed on the list of drugs used, and the safer and less toxic ones should be selected. The benefit derived from the judicious use of such drugs justifies, to my way of thinking, the increased risk entailed. In my experience, the majority of the patients having such drugs show a more rapid and satisfactory postpartum recovery, and the fetal mortality rate is not affected.

OPERATIVE DELIVERIES

The percentage of operative deliveries is increasing. For many years it has been variously stated as from 5 to 15 per cent. Plass states that it should be around 5 per cent, but most writers have felt this figure to be too conservative. In New York City in 1930-1932 the incidence was 20 per cent, while in Philadelphia in 1931-1933 it was 28 per cent. Dallas of San Francisco reported a series of one thousand consecutive deliveries occurring in private practice during 1929 to 1933, in which operation was done in 62 per cent. In this series, 13.4 per cent were cesarean section. Similar figures for cesarean section are reported in other cities. In the Boston Lying-In

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* From the Department of Obstetrics and Gynecology, Stanford University School of Medicine.

Chairman's address before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

Hospital in 1929-1930, eight per cent of all deliveries were by cesarean section, while in the Jefferson Hospital in Philadelphia the figure was 16 per cent. The advantages of the low cervical operation have raised the cesarean percentage considerably, but at the same time have almost entirely eliminated the harmful operation of high forceps. Dallas reports only three high-forceps operations in his series. This should reflect favorably on the fetal mortality rates. Plass, in reporting 4,839 cases of death, occurring in thirteen states in 1927, found 2,225 operations, or 46 per cent; and of these, 11 per cent were cesarean sections and 16½ per cent were forceps. In a similar study in 1927 by Adair, Mussey and Holmes, out of 2,500 puerperal deaths there were 1,700 operations; of these, 12 per cent were forceps and 9 per cent cesarean section. These figures may not give a true picture of the incidence and influence of operative deliveries, however, since an analysis was made of only those patients who died. A clearer picture would have been obtained had the entire series of patients delivered been reported. It is probably true that too many operations are done. For many of these there is no justifiable indication, and at times the facilities are inadequate; often the operator is not sufficiently trained. McIlroy expresses the matter superbly when he says that "operations are easy, but decision as to their necessity requires judgment and experience." Kosmak, in reviewing 2,800 cases of labor in primiparae in the Woman's Hospital, New York City, found less damage resulting from so-called prophylactic methods, including low forceps with episiotomy, than from spontaneous deliveries; but he limits the procedure to men adequately trained and to hospitals adequately equipped. This limitation is absolutely essential. Undue importance, then, must not be given to operations as a factor in mortality. Undoubtedly some patients are lost as a result of the operation performed. Many babies and mothers would probably have less morbidity and mortality if the indicated operation was skillfully performed at the proper time. In analyzing the series above reported by Adair, Mussey, and Holmes, the causes of death are given as: sepsis, 41 per cent; toxemia, 23 per cent; and hemorrhage, 11 per cent. These conditions account for 75 per cent of the series. Operations may have been used in the delivery of these patients, but it was not *per se* the principal factor in the tragic outcome.

MORTALITY RATE IN PREGNANCY

The White House Conference on Prenatal and Maternal Care concluded that the high maternal mortality rate of this country is a reflection on the training and education of the personnel responsible for furnishing maternal care. The report of the committee of the New York Medical Society states that 61 per cent of the preventable deaths are the fault of the medical attendant, usually brought about by some incapacity, such as deficient judgment, lack of skill, or carelessness.

HOW CAN EDUCATION BRING ABOUT BETTER OBSTETRICS?

Having set before you the principal factors associated with the present mortality rate in this country, we shall turn to the effect of education in bringing about better obstetrics.

Progress of obstetrical knowledge, rapid in the last few years, has been along four general lines, namely, the development of asepsis, the extension of prenatal care, improvement in operative technique, and the employment of analgesics and anesthetics for the relief of pain. This knowledge is available to every student and medical graduate at the present time. The methods by which it is taught and the application of it by the practitioner will be discussed later in this essay.

PUBLIC SHOULD BE EDUCATED

It is essential that the public itself be educated regarding procreation and its manifold problems. Maxwell has stated that "human genetics and eugenics should be carefully considered in any plan on race betterment ideals." This statement will probably become increasingly important as the public becomes more obstetrically minded. The campaign of education should proceed through agencies of the medical profession, particularly those of the public health. Women should be taught to place themselves promptly under competent medical supervision. The importance of the pre- and postnatal periods should be explained relative to hygiene, diet, and minor ailments in pregnancy; and as to the duties and responsibilities arising in the puerperium.

The widespread and helpful influence of social workers should become more and more felt in preventive medicine. The training and medical supervision of this group should be such that they will become a prominent factor in bringing about education of the public.

LEGAL RECOGNITION OF THE MIDWIFE

Obstetrics is the only branch of medicine which can be legally practiced by persons not having a medical degree. In Europe the midwife is an old-established institution. By law she is controlled as to license and reports including disease notification and births, requirements for calling physicians in emergencies and in complicated cases, and punishment for malpractice. There are only two schools for midwives in America, one in Philadelphia and one in New York. Many states have laws governing midwives, but they are less stringent and less rigidly enforced than in Europe. In the United States, at present, midwives deliver about one patient in six, in some states as many as one in three. In four states, having over 10 per cent of the deliveries attended by midwives, the maternal death rate was the same for doctors and midwives. This finding has been usually explained by the fact that midwives are required to call in physicians in difficult or emergency cases. Frequently these patients are at a stage where ideal treatment cannot be given. The midwife is, at present, a necessity. Better supervision and control will improve her and her work.

PLACE OF THE NURSING PROFESSION IN OBSTETRIC PRACTICE

The nursing profession occupies a high place in rendering a service well-nigh indispensable to the sick. The physician is grateful for its help; but a word must be said regarding nursing education. The requirements of many training schools for nurses have improved so that a better educated type is now being graduated from such institutions; but the educational prerequisites in many schools is still too low. As a result of a survey made in 1930, the conclusion was drawn that many nurses do not understand the meaning of adequate maternity care. It is a fact that many women patients are influenced by the graduate nurse, and it is exceedingly important that she be correctly informed, and that she thoroughly understand the full significance of such advice as she may offer; therefore, special training beyond that offered in the regular nursing curriculum should be given the obstetrical nurse. The opportunities of such a well-trained nurse for communicating obstetrical knowledge to the public are second only to those of the physician.

THE EDUCATION OF THE PHYSICIAN

What has been said above regarding education is certainly most desirable; but it is secondary to the most important factor concerning this entire problem, that is, the education of the doctor. The responsibility for the maternal mortality rate is being placed more and more on the shoulders of the physician. We must recognize the fact that the physician at time of graduation is not qualified to do satisfactory obstetrics any more so than he is to do major or special surgery. Munro Kerr quotes the following recommendation from the report of the Joint Education and Examination Committee of the General Medical Council of Great Britain: "For first, every practitioner must know thoroughly well and in a practical way how to conduct safely a case of labor, particularly a complicated case." The attainment of this result would be ideal. Why does not such a situation exist, and what can be done to bring it about?

TIME ALLOTTED TO OBSTETRICS IN MEDICAL SCHOOLS

The explanation begins with our medical schools. Adair states that the main purpose of undergraduate medical education is the laying of the foundations for a knowledge of medicine on which subsequent structures can be built for general or special practice, and for teaching or research, and for public health activities. This viewpoint is correct, but it is not impressed sufficiently upon the public to enable them always to distinguish between the well and the poorly trained practitioner. Only in recent years has obstetrics been considered a surgical specialty, and has received serious consideration in the arrangement of the curriculum. Too few hours of instruction have been allotted. Since gynecology and obstetrics have been combined in many medical schools, efforts are being made to give these subjects as many hours of instruction as are given to general surgery. Cornell Medical School recently adopted such a program. Allotted hours alone, however, cannot train an obstetrician. The method of teaching and the ability of the teacher are of the utmost importance. Ample clinical facilities are essential. Medical schools should provide sufficient clinical material to fulfill such requirements, or limit the number of students to that justified by the existing material. Lynch found that most medical schools are unable to give their undergraduates cases sufficient in number to demonstrate ordinary complications. Regarding this, it is interesting to note the results of a questionnaire sent by Findley in 1931 to the deans of all schools having a four-year course. To the question, "What is a reasonable number of labors for a student to observe?" there were fifty replies, forty-three stating, "fewer than thirty." To the question, "What is a reasonable number of patients to deliver?" there were fifty-four replies, forty-eight answering, "fewer than twenty," and eighteen answering, "fewer than ten." Only thirty-nine schools had facilities for giving each student as many as twenty deliveries. This gives a fairly accurate idea of the regard in which obstetrics has been held by the deans of our best medical schools. Their opinions are probably influenced by the lack of facilities for providing more training. Even more interesting is the result of a questionnaire addressed to the graduates of the above-mentioned schools. Six were chosen from each school, and were graduated in the years 1921 to 1928. Of 158 questioned regarding the number of patients they had delivered, eighty-one had none in their junior year; eighteen had none in their senior year; and thirteen had none in their interne year. In the same number of graduates, fifty-nine in their junior year delivered fewer than thirty cases; 109 in the senior year delivered fewer than thirty cases; and fifty-one in the interne year delivered fewer than thirty cases. To the query regarding home deliveries, sixty-two of the 158 had done home deliveries without having an instructor present. It seems incredible that the modern medical schools would send out students to deliver women in their homes without having an instructor present. It certainly is not giving the public the kind of obstetrics to which they are entitled.

MANDATORY INTERNE YEAR

Realizing full well, then, that at the end of the medical course the young graduate is not properly qualified or equipped to do satisfactory obstetrics, although legally entitled to do so, what facilities and opportunities are available to further equip him to measure up to Kerr's recommendation? First, let us approve of the required interne year which some schools have adopted. This added year furnishes valuable opportunity to the student to apply, under supervision, knowledge gained in the regular medical course. Opportunities for further improving one's obstetrical knowledge, and acquiring experience, is furnished by hospital residencies. The Council of the American Medical Association has recently made a survey in which they report that in this year 1936 there are available 2,600 residencies in specialties in 405 hospitals. Most of these are for the period of one year. While this length of time is not adequate for the training of a specialist or teacher, nevertheless it will go a long way toward raising the general standard of graduate obstetrical education. In order for such residencies to be of maximum value the hospital concerned should have a competent teaching staff, and should have the work well supervised.

The training of specialists and teachers will not be fully discussed here, as the main purpose of this paper applies to the general practitioner, because we believe that in his hands lies the major responsibility for maternal welfare. The specialist and the consultant are essential, and should be readily available in difficult complications of pregnancy and labor, but their influence should be in the direction of helpful coöperation and teaching. With the means of rapid transportation now available, no physician, however remote he may be from a medical center, need be without the advice and help of a well-trained specialist. The economic problem involved in this last statement will prove somewhat troublesome, but is not beyond satisfactory solution.

POSTGRADUATE COURSES

Many graduates, after becoming established in practice, will not do obstetrics, but many will of necessity or by choice have a variable number of cases. What can be done to continue the education and interest of such practitioners, particularly along practical lines, which will keep them abreast of advances in technique and in treatment? Some medical schools have adopted "refresher" courses, lasting from one to six weeks. These courses, where given, have proved very stimulating and very helpful to those enrolled. They should be carefully planned and given in such a way that the graduates get information and advice which will prove most helpful to them. Care should be exercised in choosing the proper instructor for such courses. He should be a senior staff member who understands the problems of the practitioner, and who has had sufficient clinical experience to speak with authority. Some states have adopted so-called "circuit" courses. By this method a well-trained instructor from a medical school is sent to various communities in the state to give a course of three or four lectures or demonstrations whenever practical. This method is very popular with many practitioners because it does not necessitate leaving their work; it is less formal and results in the development of a better professional spirit. The ability and personality of the instructor determine the success of such a plan. Another effort along educational lines which should be helpful to both profession and public is being made by the American Board of Obstetrics and Gynecology. Its aim is to improve the standards of practice of obstetrics and gynecology, to determine competence of specialists in this branch of medicine, and to serve the public, the hospitals, and the medical schools by preparing lists of practitioners who have been certified by the Board. It may be desirable to consider in the very near future the establishment by legislation of standards qualifying such practitioners and the granting of special certificates or licenses to those who by special training, experience and examination satisfy such requirements. The benefit resulting from such measures as above outlined and recommended would be the establishment of better obstetrical care, ultimately manifesting itself in better protection for the obstetrical patient.

490 Post Street.

DERMATOLOGY—SOME THOUGHTS ON ITS FUTURE*

By William H. Goeckerman, M.D.
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It has been customary in recent years to take stock and endeavor to visualize the future of medical practice. Some were ready, two or three years ago, to revert to ancient practice and relegate the specialist to a secondary position. In fact, some advocated less preparation for the medical degree. They admitted that this would lower the quality of service, but argued that not all can demand the best. This point of view, no doubt, was brought about in part by the economic conditions of recent years.

NEED FOR SPECIALIZATION

However, there is a surging tide in the evolution of medicine, part of progress if you will, as in all other walks of life, which will not be denied. Your farmer, your housewife, your mechanic—yes, your common day laborer specializes. The whole present-day economic life is built on the principle of specialization. It is true that here and there we still find the practices of a past generation in the arts as well as in medicine, one individual covering his particular field rather thoroughly, sometimes to the decided advantage of the community. In the main, however, it cannot be denied that society is better served by far through an intelligent specialization. Whether such specialization should be intensive will depend upon circumstances. I believe we will all agree, for instance, that the ophthalmologist who devotes intensive study to the fundus, with reference to neurologic and internal medical problems, to the exclusion of surgery and treatment problems of the eye has a field so limited that he must be working under very special conditions. But few could make such a choice advantageously. Herrick has said: "To the brilliant mind of half a century ago a working knowledge of all the departments of medicine was attainable; today such a prodigy is impossible." That is trite today, because even many of the departments of medicine no longer permit proficiency in their entirety. Reasonable specialization under proper conditions is, therefore, eminently justified.

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* Chairman's address before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25 to 28, 1936.

FUTURE OF DERMATOLOGY

With this axiom in mind I should like to place before you some thoughts on the future of our own specialty. It can frankly be stated that our medical colleagues not in the specialty have a very hazy idea of the aims of modern dermatology. With regard to this matter they are still in the "morphologic" era. If only they can give the child a name on the basis of its external characteristics, then some recommended drug and, presto! it is easy or possibly very difficult. As in every other department of medicine, the specialist in dermatology must be endowed with skill, knowledge, and judgment. Few have these qualities in equal degree, and happy is he in whom they are well balanced. Skill can be acquired, as in surgery, by repeating the technical procedure frequently. Often it is the intellectually less gifted but endowed with a mechanical bent who removes superfluous hair, telangiectasia, warts, nevi, most deftly, who uses local anesthesia most cleverly, and who enters a vein and spinal canal most expertly. You all know the old story about the imbecile who is active in a class of backward children. On a given occasion the professor demonstrates this child before a group of students. After pointing out the lack of intelligence, he emphasizes by demonstration the mechanical skill of the child, expands on the desirability of placing this child in a position where such gifts as it has may prove useful. Toward the end of the demonstration he ends with a short quiz, and requests that one of the students briefly outline the occupation such a child might follow. The student, after some hesitation, blurts forth with: "I think he would make a good surgeon." This story is, of course, no longer apropos, but even thirty years ago was not much beside the mark. While a reasonable degree of technical skill is necessary and desirable for the dermatologist, it is, in my opinion, the least important. It is, however, often the individual mechanically inclined who impresses the uncritical patient most favorably. Possibly this accounts for the emphasis often placed upon it.

FUNDAMENTAL KNOWLEDGE NECESSARY

Knowledge in dermatology can be acquired. It does mean, however, close application for a considerable period of time. Genius has been defined as the ability to take infinite pains. While the dermatologist may not be a genius, the true specialist can evolve only by taking infinite pains in close application. This means gathering detail both in theoretical book learning and practical observation. It is detailed knowledge that distinguishes the true specialist. The necessity of close application in gathering detailed knowledge has been demonstrated to me again and again by watching the postgraduate student in our specialty over a considerable number of years. I have seen such students spend three years in daily close contact with dermatologic problems, and at the end of that time be unable to hold their own in a discussion of some question related directly to dermatology. The fault lay in a lack of close application to study and independent thought in the light of such study on the problems encountered daily. Judgment is in part, no doubt, an inherited characteristic. There is a type of mind that never acquires it, even if endowed with a retentive memory and industry. Without knowledge judgment cannot be developed. But knowledge must be well digested before it becomes part of good judgment. In addition to these qualifications the expert in dermatology is fortunate if he is visual-minded, much as the good musician has auditory endowments without which he cannot be a master.

APPROACH MUST BE ALONG MANY LINES

The modern dermatologist thinks essentially in terms of biology, physiology, chemistry, and histopathology. To be sure, gross morphology retains its importance and always will, but it is not by any means enough. A name for a special type of eruption is needed in order that intelligent communication may take place between initiated individuals. Its clinical behavior must be known as far as this is possible. But the approach to treatment can be intelligent only when thought is given also to the details of the histologic picture, to the probability of an infectious, allergic, endocrine, metabolic, toxic, neurogenic, or other background. Many of the cutaneous eruptions are purely symptomatic, and empirical treatment can only be haphazard. Let me briefly explain on the basis of a chronic urticaria what is in my mind. To immediately think of food hypersensitiveness or a multiplicity of skin tests just because allergists in their enthusiasm have not seen the forest for the trees is nonsense, because it is very seldom that food is the causative factor. It is well known that chronic gall-bladder disease, chronic appendicitis, achlorhydria, constipation, thyroid disturbance, chronic infections of various character, neurogenic and psychogenic upsets, etc., are usually responsible. It is apparent then that within certain limits he must have the approach of the internist rather than the allergist. While it may develop that the systemic difficulty should be managed by the internist, the latter is not in position to determine the significance of most cutaneous lesions. I make this statement confidently as the result of close coöperation with good internists for a considerable number of years. I believe I have said enough to emphasize that the expert in dermatology is no longer chiefly a morphologist who gives the disease a name, which to the average medical mind smacks of verbosity. Nor is he primarily a technician whose supreme interest is the deft removal of a wart or mole. In the use of ointments or other applications he does not think only of a name and some favorite drug. He never asks, or at least he never should ask: What do you do for such and such an eruption? Instead he uses his experience and technical accomplishments with intelligence, endeavors to acquire all the knowledge possible on a particular subject, and brings such judgment to bear as his native endowment permits him to acquire. If you agree with me—and those who know the problems of dermatology readily will—you will note that intelligence and learning of the highest order are required in the real expert. In the main, the problems of dermatology are difficult and complex, which no one with real experience will deny.

DERMATOLOGIC PRACTICE NEEDS SPECIALIZATION

In my opinion the physician without special training does not manage cutaneous diseases successfully. Let me call your attention merely to so simple a problem supposedly as scabies. Thus far I have mentioned the qualifications which fit the expert to deal with his clinical problems in the most approved manner. There is another field into which he ventures, with certain reservations justly so. He engages in research. Many have large numbers of tubes filled with culture media, and others even numbers of experimental animals, or chemical apparatus at their disposal. Unless an individual is specially qualified, such interests contribute little of real value to clinical dermatology. The test-tube and the animal are not human, and the reactions and problems are seldom the same. Such research work can well be left to the pure scientist or to those primarily interested in the laboratory. We know only too well that many of their deductions are faulty or not applicable in the human. Of course there can be no objection to a young dermatologist working in this field under supervision. But there is a type of research that should receive better cultivation than it does, and that is clinical research. The importance of this type of research is apparently only slowly regaining the recognition it deserves, not only in dermatology but in medicine in general. I do not refer to the common practice of trying to find one's pet conception whenever possible, or of breaking into print with immature or overenthusiastic observations.

IMPORTANCE OF SCIENTIFIC APPROACH

I would rather emphasize the critical attitude, the uncompromising search after truth, let the result be what it may, the incessant search for flaws in possibly hasty conclusions—in brief, the truly scientific approach. For this purpose a carefully studied clinical case is often more valuable than undigested statistical studies based on laboratory findings. If this form of research involves laboratory problems, the joint approach with a man versed in laboratory practice is desirable. An outstanding example of the form of research I have in mind is the work repeatedly reported on recently by Stokes and Becker. Those of us who have close contact with general medical problems have recognized for many years the importance of the autonomic nervous system in its relation to various dermatoses. If we have failed to do this we no doubt have missed an opportunity to give of our best to the patient. To be sure, this whole problem is in its infancy, but it should have our close critical attention. It is likely that significant progress will only be made as the physiology of the nervous system becomes better known. The vast importance of this problem to us cannot be denied, but as true specialists we should see to it that ridiculous deductions do not creep in, and that the interest in it is not carried to the absurd, as has been done so often with more or less fundamental problems in medicine.

COLLATERAL KNOWLEDGE DESIRABLE

In addition to all these professional qualifications, a thorough grounding in the problems of history, a sagacious understanding of biography, and more than a smattering of philosophy, psychology, and even possibly religion should contribute attributes which make for the finest type of specialism. Such general cultural knowledge makes for a better understanding and management of disease problems even in dermatologic practice.

IN CONCLUSION

The somewhat crude encroachments of other specialties make me wonder particularly just how dermatology will shape itself in the future. The unscientific approach of the so-called allergist, endocrinologist, and radiotherapist to dermatoses will vanish. Such specialists will in time cultivate the field they know something about. Truth will out in these fields as well as in our own and only truth can endure. The old order in our specialty must pass, and in the main it has passed, but most of our confrères not in the specialty still think of it in terms of a hundred years ago. My dissertation was conceived in the thought that we must be physicians first and specialists second rather than only specialists. Not the crusading, but the scientific and judicial attitude must prevail, and this is true whether we are dealing with manifestly cutaneous lesions due to allergy or lesions in which this biologic phenomenon is in no way concerned. It is only in this way that we can retain our proper niche, and the respect and support of the medical profession as a whole. But if we work to this end and show it not only in word but in deed as well, there is no doubt that the specialty will fill a necessity and endure through generations to come.

727 West Seventh Street.

APRAXIA*

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Discussion *by Walter F. Schaller, M.D., San Francisco; J. M. Nielsen, M.D., Los Angeles; Thomas G. Inman, M.D., San Francisco.*

APRAXIA has been described as the inability to perform purposeful movements, not due to paralysis, ataxia, agnosia, or general physical or psychic impairment. It is comparable to the condition of motor aphasia, in which the patient knows what he wants to say, but is unable to express himself. So the apractic, without being paralyzed and knowing the use of objects, is unable to handle them in a normal manner.

LIEPMANN'S CONCEPT OF APRAXIA

The concept of apraxia was developed by Liepmann in 1900 on the basis of a single case. This case presented a marked degree of unilateral apraxia, and offered a remarkable opportunity for analysis. Liepmann not only made an exhaustive clinical study of the patient, but was able to follow the case post-mortem and to determine the brain lesion responsible for the symptoms. Liepmann's work, based on this case, remains today the outstanding contribution to the subject of apraxia, and it was he who first clearly differentiated the functions of the afferent and efferent cerebral association pathways.

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* Read before the Neuropsychiatry Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

EVENTS IN THE PERFORMANCE OF A MOTOR ACT

Since apraxia is a disturbance of an individual's motor reaction to his environment, it is necessary to have a clear understanding of the related processes which are necessary to normal activities. When a person performs a motor act on the request of another, an interesting series of events must occur in the brain of the subject. The sound of the voice is perceived (auditory perception); the words and sentences are recognized (apperception or gnosia); associative memory of related ideations and concepts are stimulated; the idea is evaluated in the affective sphere in regard to its personal significance; a plan of action or response is decided upon (ideational plan); volition directs action in the execution of the ideational plan, and a sequence of appropriate, voluntary, coördinated movements are executed which follow kinetic patterns that have been established by inheritance, experience, and habit. Throughout the entire process of perceiving the sensory impression, elaborating it and acting upon it, consciousness, or an awareness, must be directed by a concentrated and flexible condition of the attention.

Normal motor responses thus depend upon a rather complicated series or sequence of psychological functions. Of these functions the primary sense perception, and the voluntary motor impulse, are effected by cerebral projection tracts, sensory and motor. All of the other items in the series are the work of cerebral association and commissural tracts. By definition, therefore, apraxia must be due to lesions of certain cerebral association tracts relating to ideation and voluntary motion. Incidentally, it may be remarked that the aphasic disturbances of speech result from lesions of cerebral association areas—not projection tracts. Motor aphasia is a special form of apraxia; and word deafness and blindness are agnosias for auditory and visual word symbols. Paraphasias result from disturbances in the ideational fields.

SOME CLINICAL SYMPTOMS RESULTING FROM ORGANIC LESIONS OF THE BRAIN

It is interesting to consider this group of clinical symptoms resulting from organic lesions of the brain which affect the association and commissural tracts in contrast to the more easily recognized symptoms due to involvement of the projection tracts serving the sensory and motor functions. We thus have the agnosias, amnesias, aphasias, apraxias, and hallucinations, which are well established on an organic basis. This brings us close to the concept of localization in the psychoses. Drug intoxications, encephalitis, paresis, and many other clinical pictures show distinct tendencies to exhibit symptoms of agnosia, amnesia, perseveration, temporal and spatial displacements similar to those seen in organic brain disease, and in which there is at least a suggestion of localization. On the other hand, it may be stated, as a general rule, that where organic disease causes agnosias, aphasias and apraxias, there is always some defect of cerebration beyond that implied by the diagnosis.

LIEPMANN'S CASE

Liepmann's famous case started December 1899, with an apoplectiform attack in a man of forty-eight, which resulted in a condition that was diagnosed in two institutions as aphasia with dementia resulting from apoplexy. When the patient came under his observation, two and one-half months after the onset of the condition, Liepmann found a right-sided apraxia and Broca's aphasia. The patient could understand and execute orders by using his left arm when the right was restrained. This proved that he was neither suffering from word deafness nor any high degree of dementia. Movements of the right arm, on the other hand, appeared to be out of control although there was no paralysis or ataxia. He moved the arm freely and movements were well coördinated. He picked up objects, but not the ones he was requested to pick, and he could not imitate movements with the right arm only. In the course of time he learned to adjust himself fairly well by using the left arm for all purposes. The case came to necropsy after about two years. In the meantime, additional vascular accidents causing left hemiplegia had occurred. The patient died in April, 1902.

The important pathological findings of this case included almost complete destruction of the corpus callosum from thrombosis of the anterior cerebral arteries; an area of softening in the left inferior parietal extending to the body of the angular gyrus; lesion in the left frontal under Broca's area; and an area of softening in the right side of the brain involving the angular gyrus. It was remarkable that the central convolutions on the left side were intact, as were their projection tracts. On the other hand, the central areas were largely isolated from the rest of the brain by the lesions of the corpus callosum, frontal and parietal areas.

Liepmann places the most importance on lesions of the left parietal region in the causation of apraxia. He also considers that, for limb movements as well as language functions, the left or major side of the brain takes a leading part, in the direction of movements executed by the right side of the brain through the medium of the corpus callosum, and that movements of the left side of the body executed by the right cerebral hemisphere, are to a certain degree directed by the left hemisphere through the corpus callosum.

CLASSIFICATION OF APRAXIA

Liepmann's classification of apraxia has been commonly accepted and may be outlined as follows:

Definition.—Apraxia is the inability to perform purposeful movements, the inability not being due to paralysis, ataxia, agnosia, or general physical or psychic impairment.

Ideational Apraxia.—This type is manifested by confusion of movements, omission of certain important parts of a series of movements, perseveration, inverted order in the series, etc. This is due to a lesion which disturbs the ideational plan, and is characterized by disturbance of attention, memory, temporal and spatial relationship, etc., in the ideational field. There is frequently a memory defect giving rise to symptoms of apparent absentmindedness. Symptoms of agnosia are common, as are those of aphasia or paraphasia. Coördination of movement is good. Imitation of movement is fair because it is easy for the patient to follow a plan furnished from the outside.

Ideokinetic Apraxia.—In this form of apraxia the sequence of activity is normal up to and including the formation of the ideational plan, but the translation of the plan into movement is defective. It is manifested by a total inability to perform an act, or by performing some act which is not intended. Purposeless movements are frequently observed which suggest an element of ataxia in the picture.

Limb Kinetic Apraxia.—This type is observed to result from a disturbance in the kinetic patterns in or near the motor area, and may result from a lesion of the motor area not sufficient to cause paralysis. It is manifested by inability to perform skilled movements. The sequence and general form of the movements appear normal, but they are awkward, as if being done for the first time.

Sympathetic Apraxia.—This is due to lesions of the corpus callosum interfering with the influence of the left cerebrum in directing movements executed by the right side. This is most characterized by awkwardness of movement, and commonly by inversions of movement of the type of mirror-writing.

REPORT OF CASES

CASE 1.—H. P. C. Patient first seen February 18, 1927. He gave a history of periodic headaches for years, usually most marked in the left frontal region. Headaches were attributed to overeating, and were relieved by a physic. They were not associated with nausea or vomiting, and have not increased with the years. In 1923 he first noted difficulty in making out a check. Since then he has had increasing difficulty in remembering recent events, becomes confused in making out accounts, and is obviously growing worse. In December, 1926, he had an operation by Dr. C. Rey,-nolds, left temporal craniotomy, in which it was stated that a subdural collection of fluid was found. The brain was said to have been depressed "one and one-half inches on the left side," with changes in the vessels and cortex. Following the operation some improvement was noted for a few months; then he became worse again and now (February 18, 1927), is worst of all. He is awkward in dressing and in eating. He says things seem to be "out of line." His memory for remote events is good, but for recent events poor. If his coat sleeve is wrong side out he has difficulty in fixing it. He has had difficulty in putting coat on coat hanger only during the last few months. On attempting to place coat on hanger, patient pushes one end of it into one sleeve, but fails to understand what to do with the other end. After puzzling over it for two or three minutes, he throws coat and hanger down with impatience. His wife states that many times failure is not noticed by patient. He shows annoyance and depression after failure, especially when observed. He takes off and puts on shoes and socks without difficulty. His wife states that his gait and posture have changed altogether. He walks with forward stoop, swings arms and legs in different manner. He reads slowly, hesitating, stumbling, mispronouncing occasional long words. Wife states: "He sometimes says, "I never saw that word before," even of words he has known all his life. The patient often has a thought or an idea he wishes to express, and loses it before he can say what he wants to. Facility in solving problems, even the simplest, is lost. Numbers are almost totally confused. He can add 3 and 2, but says 7 plus 3 are 12, and 4 plus 2 are eight. He failed completely to add 67 and 23. He counts well to ten and more. Five in one hand and four in the other are not added correctly; he says the answer is 7.

Examination on February 18, 1927, showed cranial defect of left frontal and parietal region, depressed and pulsating (never has bulged). Visual fields are good to rough tests. Eye-grounds are normal. There is no diplopia or nystagmus. Pupils are of normal size, equal and regular, and react normally to light and accommodation. There is a lag of facial movements on the right. There is loss of many skilled movements. Gait and posture show stooping, and swinging of arms and legs. Romberg is negative. There are no tremors and no athetosis. The patient is right-handed. The tendo Achillis reflexes are absent. Plantars are normal bilaterally. Consciousness is clear. Memory, orientation and attention poor. He shows some loss of emotional control and much anxiety, with impatience at failures.

March 18, 1929.—Reëxamination: Patient has failed in memory for recent events to point of forgetting all details of important business matters. He is also unable to sign his name to business papers, though he can sign on unimportant papers. Effort to write other words usually fails. He works about home and the garden. Eats and sleeps well, and has no particular discomfort. Eye-grounds are flat, veins full, arteries small, nerve margins clear, discs a little pale.

December 14, 1929.—Reëxamination: The patient is robust in appearance. Sensory aphasia is incomplete. Alexia. Speech: Jargon tendency, with good enunciation, but often mumbles. Apraxia: Marked. Reflexes: Biceps moderate, knee-jerks hyperactive, tendo Achillis not elicited. Marked increase in muscle tone. Can use spoon in eating with some difficulty. Garden rake he is apt to get upside down. General health is good. Coördination fair in walking, standing, sitting, etc. No. weakness or paralysis of any extremities. No ataxia. Pupils equal and react to light. No choked disc. Pulse full, regular, 75.

This case presents a rather marked picture of ideational apraxia with additional symptoms of mental impairment, inability to calculate, marked aphasic disturbance with jargon speech, and semantic defects.

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CASE 2.—Mrs. M. W. came under observation October 24, 1933. Patient was forty-five years of age. She gave a history of having had sudden right hemiplegia with loss of speech at the age of thirty-one. She made fairly good recovery within one month. Again at the age of forty-three she suddenly lost the use of the right arm, and was unable to swallow or speak for a few days. Since then there has been some stammering and impairment in the use of the left arm, as well as the right.

Present trouble began on October 3, 1933, with an acute or sudden illness. Patient became partially unconscious, with stentorous breathing, and was unable to swallow. She could not talk, open the mouth, or move the tongue.

Examination made three weeks after the onset. At that time the patient had been tube-fed daily for three weeks. She was conscious, alert, quick to understand spoken language, and could read fluently and understandingly, but could could not speak a word. All extremities are moved freely. The patient was able to walk and used her right hand in writing, although what she wrote was almost illegible; she is normally right-handed. Face movements were somewhat impaired, more so on the right. Extra-ocular movements were free in all directions. Voluntary movements of frontals and orbiculars good, but face, tongue and jaw movements were almost nil. The patient was unable to move the jaw or lips, or protrude the tongue. She swallowed with much difficulty, and only a teaspoon of liquid at a time. In smiling, the face movements were fairly active and symmetrical. Patient was able to blow out a match held several inches in front of her face. Tendon reflexes were somewhat hyperactive in all extremities, more so in the arms, and most in the right arm. No pathological toe-reflexes on either side. Visual fields were normal. Astereognosis of the right hand; left normal.

Last observation was made on September 17, 1934. Patient had improved gradually, and was married on February 14, four months after the onset, although she was still unable to talk. She was able to vocalize vowels, and still wrote with her right hand, but chirography was minute and indistinct. Formerly an experienced typist, she was asked to write on the typewriter. Although she appeared familiar with the instrument and wrote fairly quickly, most of the words were misspelled and letters reduplicated. Left hand was used fairly well, but the right hand failed to hit the right keys. Husband stated that patient used right hand much less awkwardly than a few months ago. She has gained in weight and feels well. She goes down town alone, attends the movies, etc.

The apractic symptoms in this case were of the ideomotor type. In addition to apraxia of the right hand there was apraxia of the mouth. The inability to swallow and inability to talk were also probably apractic symptoms. Symptoms other than apraxia included astereognosis of the right hand and a degree of mental impairment and personality changes, although she was able to read and understand spoken language fairly well.

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Case 3.—Mrs. E. C. G., fifty-nine years of age. Had toxemic puerperal psychosis in 1911. Has been deaf for many years, left ear more impaired than the right. In October, 1934, she began to notice trouble in writing. Words and letters were well formed, but important words omitted from sentences. In January, 1935, she developed paraphasia characterized by erroneous statements, which the patient herself would correct. About this time trouble was noticed in the movements of the right hand. Coffee was spilled from a cup when the patient tried to drink. The left hand was used for common movements, although the patient was hight-handed and there was no paralysis. It was noticed that the movements of the right hand succeeded better when the patient watched it.

Exploratory operation revealed a large cyst in the left parietal, which was drained and followed by a period of improvement in all symptoms. Air was injected into the cyst cavity, and anteroposterior and lateral x-rays gave a good localization of the lesion, which was about two and one-half inches anteroposterior, two inches vertical, and two inches transverse, extending apparently from the postcentral convolution to the angular gyrus above the fissure of Sylvius.

The patient was able to read and speak, although both these functions were impaired. She understood spoken language, but was somewhat slow in comprehension. Opportunities for study were limited, as the patient was not coöperative, but the data available is sufficient to demonstrate definite apraxia, mainly of the ideokinetic type, due to a lesion of the left parietal lobe.

Although this patient was not studied extensively, she presented a picture of large, well-localized lesion in the left parietal lobe, with symptoms of ideokinetic apraxia in the right hand. There was also a defect of speech and impairment of mental processes.

Case 4.—Miss M. D. Aged twenty-one years. Patient was injured in an automobile accident about seven weeks ago. She had a depressed fracture in the left parietal region, repaired soon after the injury. The patient also had fracture of the right femur near the knee, and numerous minor traumatisms in different parts of the body. She was unconscious for a long time, and there has been gradual recovery; but she has had complete right hemiplegia and complete aphasia since the accident.

Examination: Patient lies quietly in bed, conscious, mentally alert, unable to speak or vocalize or make any vocal sound. Tendon reflexes are hyperactive in the lower extremities, and there is a bilateral Babinski. Abdominals are present bilaterally. She opens the mouth and protrudes the tongue promptly. Has some difficulty in swallowing water (was tube-fed for a time after the accident). Face is expressionless, with very slight movement on the left side, also a very slight raising of the eyebrows. She is able to close both eyes. Has difficulty in showing the teeth, with lagging on the right. Throughout the examination there was no change in facial expression. Patient never smiled, nor scowled nor frowned nor moved the face. Asked if she ever smiled, she moved her lips a little bit, but did not smile. Extra-ocular movements reveal external strabismus of the right eye. Rotation of the eyes to the right fair, to the left not quite so good. Patient is unable to rotate the eyes upward above the horizontal plane. Pupils react to light. Fundi negative. Visual fields not grossly impaired. No hemianopsia. Throughout the examination the patient gave evidence of understanding promptly everything that was said to her. She read different words written on paper, with some mistakes. She carried out a series of consecutive movements with the left hand correctly, although the movements themselves were jerky and poorly coördinated. She moved the left hand and arm freely in all directions, carried out all instructions and orders, but with awkward movements. With the eyes closed she manipulated objects placed in her left hand in a normal manner. The objects were then placed among a number of others in front of her, and on opening her eyes she selected the one that she had been handling.

This case has been included because of symptoms at least simulating apraxia of the sympathetic type; that is, apraxia in the left hand with lesion of the left cerebrum. However, the character of the motor disturbance might be interpreted as being ataxic rather than apractic. It is also evident that, in addition to the cerebral lesion in this case, there are also lesions in the midbrain affecting the ocular movements and possibly also the fibers from the superior cerebellar peduncle.

CONCLUSIONS

Apraxia is a disturbance of motor expression dependent upon disturbance in the association and commissural tracts of the brain and, therefore, less definitely localizable than lesions of the projection tracts. The localizing value of apraxia varies according to the type manifested. Kinetic apraxia indicates lesion involving or in close proximity to the central convolution. Ideokinetic apraxia is caused by lesions outside the motor area, but interfering with its connections with the rest of the brain, especially the parietal temporal lobe. Ideational apraxia is of little localizing value, as it is caused by lesions of the association tracts serving attention, memory, and other psychologic functions. Apraxia is usually accompanied by, although not dependent upon, other disturbances in the association tracts, such as aphasia, agnosia, and mental impairment.

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DISCUSSION

Walter F. Schaller, M. D. (909 Hyde Street, San Francisco).—Doctor Ingham has presented a very difficult subject concisely and with due emphasis on the original contribution of Liepmann in separating apraxia from allied disorders of brain function. In 1910 I had the opportunity of attending a clinical demonstration by Liepmann in Berlin. His approach was that of mimicry or command in order to demonstrate respectively motor or ideomotor apraxia. The presence of mimia or animia is probably sometimes overlooked through the failure to apply this test for motor apraxia. Not all students of apraxia will agree with Liepmann that motor aphasia is a particular form of apraxia. Henschen, for instance, in his work on aphasia concludes from his analysis of published cases that apraxia and aphemia, or dysarthria, are different disorders.

Apraxia may be so identified with mental deterioration that it is but a symptom of this major disorder, rendering it questionable whether we should call a case such as that described by Doctor Ingham (Case 1) apraxia or dementia with symptoms of apraxia. Case 4 presents the problem of the differential diagnosis of apraxia and ataxia. I should incline to the opinion that this case was rather one of ataxia.

Report of Case.—The following case (G. E.) of ideomotor apraxia is presented with necropsy findings: A male, aged 40, suddenly developed a left-sided hemiplegia and aphasia of predominantly motor type with alexia and agraphia. The heart examination revealed a marked systolic apex murmur. Dementia was not present. Ten days following the onset the following symptoms of apraxia were found: Given a cigarette and match in the right hand, he first put the match in his mouth, then applied the unlighted match to the cigarette. A week later when given an envelope, seal, sealing wax, and a lighted match, he melted the wax, dropped it on the flap of the envelope, but failed to apply the seal. He recovered from the apraxia in approximately two months' time, but the aphasia and the hemiplegia persisted up to the time of his death, from pneumonia, a year and a half after the beginning of his illness: his speech was dysarthric and there were signs of a residual hemiplegia, most marked in the leg. It was assumed, but not definitely stated in the record, that this patient was right-handed. He used his right hand, as in writing, as one naturally right-handed. The necropsy revealed a chronic endocarditis. The brain lesions were limited to the right hemisphere and consisted of three discreet areas of softening. The largest area involved the insular cortex, adjoining frontal operculum and posterior part of the third frontal convolution. Another area was found in the central white matter involving the cortical projection fibers, and also arcuate and callosal fibers. A smaller area was present in the centrum ovale lateral to the anterior horn of the lateral ventricle, and involving the callosal fibers coursing the anterior horn of the ventricle. The hemiplegia was thus explained by the interruption of the motor projection system, the aphasia by the cortical involvement, and the apraxia by the implication of callosal fibers.

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J. M. Nielsen, M. D. (727 West Seventh Street, Los Angeles).—This is a highly important subject which deserves much more attention than can be given to it here. There is really nothing to be added to the presentation as given by Doctor Ingham.

It might be permissible, however, to mention briefly the localizing value of apraxia. The first type discussed, ideational apraxia, has no localizing value, but, on the other hand, is of great value at times in arriving at the type of toxemia from which the patient is suffering. We see it with relative frequency in bromidism. It also occurs, but less often, in allonal and barbital poisoning. It also results from cortical degeneration in general. Ideo-kinetic apraxia, on the other hand, results from a lesion on the major side of the brain, usually the left, and usually in the parieto-occipital region. Kinetic apraxia of the limbs results from a lesion affecting the motor strip. If this occurs on the major side, there may even be apraxia of the ipsilateral hand while the contralateral one is paralyzed.

Summarized, then, if the patient shows only severe absent-mindedness (ideational apraxia), this is of no localizing value. If he sets out to perform an act, but does something entirely different (such as putting his shoe into his mouth instead of on his foot, or trying to put his arms into the legs of his trousers), he has ideokinetic apraxia, and he suffers with a lesion of the major parieto-occipital region. If he knows perfectly well what he wishes to do and attempts to do it, but does not have individual power of movement of the fingers and must use the hand as a whole, he has kinetic apraxia of the limb, and the lesion affects the motor strip of the contralateral side. If apraxia is properly understood, it adds a great deal to our knowledge of cerebral localization.

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Thomas G. Inman, M. D. (2000 Van Ness Avenue, San Francisco).—Doctor Ingham has so well described the anatomic and physiologic foundations upon which the theory of the apraxias rests that little remains to be said in discussion.

As an aid in the localization of cerebral disease the discovery of an apraxia may lead to a focal diagnosis, but the plan of examination, as outlined by Doctor Ingham, must be closely followed or confusion will result. Apraxia is a symptom complex existing within a group of other symptoms, and the lesions responsible for it may lie in widely separated areas. An exact diagnosis has led to surgical intervention in the case of tumor, and relief has followed operation. Many of the recorded cases, however, have been of vascular origin and study of them has served the interests of science rather than the needs of the patient.

It was the privilege of this writer to attend Liepmann's course at the Charité in Berlin before the World War. Where the question of apraxia was to be determined, and after the necessary neurological questions had been settled, the master proceeded with the mental examination. Provided with all of the available utensils which the patient would be accustomed to use in daily life, Liepmann would ask their various uses and then direct that they be used in the accustomed manner. One can imagine the puzzled expression on the face of the patient when he found himself unable to execute the desired movements with the apraxic arm.

Well-grounded in philosophy and the sciences, Liepmann brought to the study of cerebral function a mind prepared to analyze the material which came into his hands. His association with Wernicke undoubtedly, through the study of the aphasias, caused him to think of certain results of cerebration as the end-products of a triad of mental (intracerebral) processes; a triad consisting of intrapsychical, psychosensory and psychomotor motivations. Thus his interrogation of a patient followed a prearranged plan intended to show in which of these domains function was disturbed.

Doctor Ingham's studies are of special interest to students of neurology, and lend support to their belief that mind is a product of cellular action and not, as some would have us believe, a mysterious something coming to us from an equally mysterious somewhere.

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Doctor Ingham (Closing).—The case referred to by Doctor Schaller is of much interest. If the patient was right-handed, as assumed, it is difficult to explain his motor aphasia from a right-sided lesion. Since the apraxia was manifested in movements of the right hand, it should perhaps be classified as sympathetic apraxia, but this would necessitate the assumption that the right hemisphere was the major one. I agree with Doctor Schaller's remarks in regard to the line which must be drawn between mental deterioration and evidences of apraxia. It is a fact, however, that some mental deterioration exists in every case of apraxia. It is only a question of whether the general deterioration is the cause of the disturbed motor functions, or whether the latter are of a specific type of disturbance which we recognize as apraxia. I consider that the motor disturbances were ataxic rather than apraxic in the fourth case, and they were presented to illustrate the problem of a differential diagnosis.

CARDIOVASCULAR SYPHILIS: ITS TREATMENT*

By WILLIAM W. NEWMAN, M.D.
San Francisco

DISCUSSION *by John J. Sampson, M.D., San Francisco; C. W. Barnett, M.D., San Francisco; George V. Kulchar, M.D., San Francisco.*

ONE hears considerable skepticism as to the efficacy of the specific treatment of cardiovascular syphilis. However, almost all statistics dealing with this subject concern themselves solely with the nearly terminal lesions of aneurysm or aortic insufficiency, for the reason that a diagnosis of cardiovascular syphilis can be convincingly established only in their presence. However, it is a fallacy to base our judgment entirely on results obtained after mechanical defects have been produced in valve and aortic wall which must inevitably overwhelm the patient regardless of whether the infection originally producing them is or is not controlled. We should expect our best therapeutic results during the quarter of a century of insidious progress before these irreparable mechanical handicaps occur.

CRITERIA FOR THE DIAGNOSIS OF SYPHILIS

Our criteria for the diagnosis of syphilis in general are:

1. A definite history of infection, or
2. A definitely positive blood Wassermann or Kahn, or
3. A lesion pathognomonic of syphilis, of which only saccular aneurysm or central nervous system syphilis were encountered.

Criteria for the diagnosis of cardiovascular syphilis will be discussed later.

One thousand consecutive patients coming to this office for cardiovascular examination are reviewed. A Wassermann was done on every patient, and except for the first one hundred, also a Kahn. Physical and x-ray examinations were complete in each case. No selection was made of the patients, except in so far as the cost of the examination required a certain financial competence, a factor which doubtless had a bearing on the relatively low incidence of syphilis in our series.

This marked influence of social status on the incidence of syphilis is illustrated by the finding of only 0.2 per cent positive Wassermanns among five thousand University of Minnesota students contrasted to 10.5 per cent[1] among military recruits of about the same age. Similarly, white admissions to Johns Hopkins clinic medical service showed 6.9 per cent positive Wassermanns,[2] while Kisser and Bohner report an incidence in private general practice of only 3.6 per cent,[3] about one-half the clinic rate.

We found 3.4 per cent syphilis among the one thousand consecutive patients, and the Wassermann or Kahn was positive in 3 per cent. In 3.2 per cent, cardiovascular syphilis was diagnosed, and of these, 87½ per cent had positive blood and 12½ per cent negative. The lesions were 22 per cent saccular aneurysm, 34.4 per cent aortic insufficiency, and 43.4 per cent simple aortitis. In the nine hundred cases in which both Wassermann and Kahn were done, there was complete agreement between them in 99.37 per cent. Ages among those with cardiovascular syphilis ranged from twenty-eight to seventy-two years, with an average of forty-eight years, and there were 90 per cent males and 10 per cent females.

TABLE 1.—*Entire Group of One Thousand Patients*

	Cases	Percentage
Incidence of syphilis	34	3.4
Incidence positive blood Wassermann (Kolmer) or Kahn	30	3.0
Incidence cardiovascular syphilis	32	3.2
Complete agreement between Wassermann and Kahn (900 cases)	894	99.37

There were five cases with positive Kahn and negative Wassermann.
There was one case with positive Wassermann and negative Kahn.

IMPORTANCE OF CAREFUL SURVEY OF CARDIOVASCULAR SYSTEM

Since the form of treatment which can be safely given depends on the degree of pathology present, it behooves us to make a careful survey of the cardiovascular system before planning our course of therapy. There is no question as to the importance of the treatment of acute syphilis, and there is general agreement as to what constitutes adequate therapy. In Moore's[4] large series no patient with early syphilis who received as much as three courses of arsphenamin plus interim heavy metal developed clinically recognizable cardiovascular syphilis.

LATENT SYPHILIS

This leads directly to the question of what attitude, from the cardiologist's point of view, should be taken toward the treatment of so-called latency. We must bear in mind that the patient who comes to us with an aneurysm or syphilitic aortic insufficiency may have passed through a period of over twenty years of what we designate as latency. Should we then contemplate withholding treatment from the next syphilitic who consults us merely because he has not yet developed these lesions? The answer depends, of course, on what we know concerning the course of latent syphilis in the treated and untreated patient. Even if we accept Brunsgaard's optimistic figures on the outcome of untreated syphilis, we find that about 25 per cent will die as a direct result of their syphilis, most of them (one in seven of those originally infected) from cardiovascular syphilis.[1 p. 237] On the other hand, according to Moore, treatment of latent syphilis diminishes the probability of progression, relapse, or death, from this 25 per cent to about 5 per cent. These excellent results should not, strictly speaking, be considered merely as evidence of the *prevention* of cardiovascular syphilis, but rather of the arrest of the subclinical disease; for we know from the pathologic studies of Warthin,[5] Langer,[6] etc., that 70 to 90 per cent of these patients with so-called latency would show at least microscopic pathologic evidence of syphilis of the aorta, and from clinical studies that 10 to 15 per cent of them, if untreated, will die from cardiovascular syphilis. In the face of such figures it would seem that there should be no hesitancy in concluding that latent syphilis should be treated, except perhaps in the patient over fifty years of age without symptom or sign except the positive blood. Doctor Goecherman, in this symposium, has fully covered the details of therapy of latent syphilis.

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* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

The next group of patients are those whose cardiovascular pathology has progressed far enough to produce signs and symptoms of cardiovascular disease, but has not yet destroyed aortic cusps or caused aortic aneurysm. It is, we believe, at this stage where it appears that the syphilitic has definitely embarked on the course of active cardiovascular involvement, but where the myocardium is not yet exhausted attempting to cope with the handicap of an aortic regurgitation, nor the aorta already stretched to the bursting point, that the greatest benefit, relatively speaking, can be accomplished with specific treatment.

DIAGNOSIS OF CARDIOVASCULAR SYPHILIS

We must admit at the outset that this statement does not lend itself to statistical proof, since the clinical diagnosis of cardiovascular syphilis prior to the appearance of aortic insufficiency or aneurysm cannot, we think, be made with enough certainty to make comparative figures based thereon valid. This does not mean that the diagnosis as a guide to treatment cannot be arrived at with reasonable certainty, though often it must be made by exclusion, inference, and suspicion. Unfortunately there is no pathognomonic sign for early or subclinical cardiovascular syphilis, as there is in the spinal fluid examination for subclinical central nervous system lues.

Table 2.—*Analysis of the Thirty-two Patients With Cardiovascular Syphilis*

	Cases	Percentage
Males	29	90.6
Females	3	9.4
Incidence of positive Wassermann or Kahn	28	87.5
Incidence of negative Wassermann or Kahn	4	12.5
Saccular aneurysm	7	22.0
Aortic insufficiency	11	34.4
Simple aortitis	14	43.6

In arriving at a presumptive diagnosis of simple syphilitic aortitis, we must of course in the first place be reasonably certain that the patient has syphilis, and for this we must depend by far most importantly on the presence of a positive blood test. Except in the presence of aneurysm it is a bold physician who will make the diagnosis of cardiovascular syphilis in the face of a negative Wassermann, even when pathology is advanced. The truth of this statement is shown by the low incidence of negative Wassermanns, 2 to 5 per cent,[1] in clinical series, compared with the relatively high incidence of negative serology, 25 to 30 per cent,[7,8,9] when the diagnosis is made at postmortem. Such figures, of course, mean, not that the blood is practically always positive in cardiovascular syphilis, but rather that the diagnosis is most rarely made clinically unless the blood is positive.

Having satisfied ourselves that the patient has syphilis, we must next decide whether he has heart disease, and lastly whether that heart disease is of a sort likely to have been caused by syphilis. Symptoms usually antedate signs, yet those of cardiovascular syphilis differ little from those of other types of heart disease, especially the hypertensive form, except that possibly vague or more severe substernal pain brought on or increased by exertion plays a rather more prominent rôle than do dyspnea or swelling of the ankles.

PHYSICAL EXAMINATION

Physical examination at this stage consists in an attempt to detect an abnormal aorta. We are unable to recognize the Tambour second aortic sound, so often mentioned as characteristic of syphilitic aortitis,[10] nor can we percuss satisfactorily increased retromanubrial dullness. A faint pulsation, best felt on deep pressure at the end of expiration in the second intercostal space to the right of the sternum, means a dilated aorta, and a systolic murmur over that same area should not be dismissed as of no consequence.

ROENTGEN-RAY EXAMINATION

It is, however, from a combination of x-ray and fluoroscopic examination that we obtain our earliest information of aortic disease. The routine anteroposterior and true lateral chest plates often miss the beginning dilatation, which usually pushes out from the aortic root forward toward the sternum and slightly to the right, so that its contour is thrown best into profile in the left anterior oblique position, that is, with the patient rotated so that the front of his left shoulder touches the plate, the optimum degree of rotation being found by fluoroscopy in each individual case. Obtaining a picture of such a dilatation is much facilitated by doing the fluoroscopy at six feet, finding the best angle of rotation under the fluoroscopic screen and then not moving the patient at all, but dropping the casette between screen and patient and flashing a plate of the image just observed. Figure 1 shows an arrangement for doing this. Pictures of small localized dilatations along the course of the

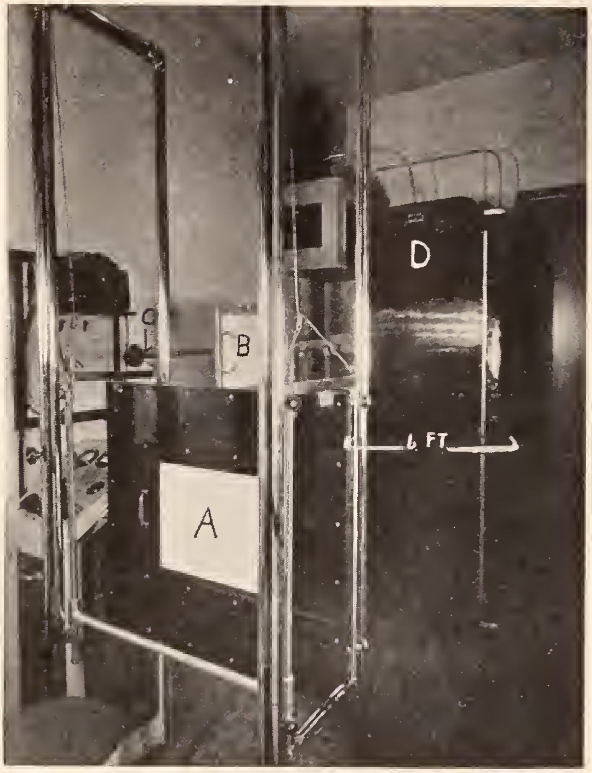

Fig. 1.—Arrangement for fluoroscopy at six feet: A, Adjustable fluoroscopic screen mounted six feet from tube and arranged to hold a cassette at its back; B, Conventional fluoroscopic screen swung out of way; C, Extension to shutter control arm; D, Back rest of conventional vertical fluoroscope.

aorta can be obtained by this method which easily might otherwise be missed.

While the electrocardiogram gives no information specifically characteristic of syphilitic cardiovascular disease, it is of value in judging the state of the myocardium which may be damaged before the development of aortic insufficiency. Usually when electrocardiographic changes are present, symptoms of pain or breathlessness on effort are also in evidence.

So then, having a patient with a positive Wassermann, especially if he is under fifty years of age and complains of substernal pain or dyspnea on exertion, in whom x-ray shows an aortic shadow more dense or broad than one would expect for the patient's age, or blood pressure, or who has a localized dilatation of the ascending aorta, often best seen in the left anterior oblique position, we feel that a presumptive diagnosis of active cardiovascular syphilis is justifiable and specific therapy is urgently indicated, as it is at this point of simple aortitis that the last good chance of a symptomatic cure is possible before valve leak or aneurysm do irreparable damage. Treatment must now be somewhat more cautiously initiated than before the onset of symptoms and signs has occurred, and should not commence with arsenic. At least eight weekly injections of bismuth, plus potassium iodid by mouth, should precede the neo, the first dose of which should not exceed 0.3 gram and the succeeding weekly doses of the course of eight not over 0.6 gram, after which the bismuth course is repeated, so that in the first eighteen months three such courses of bismuth and of neo are planned. Thereafter one yearly course of each is advisable as a routine, irrespective of the serologic status. Treatment during the stage of simple aortitis not infrequently requires the application of such nonspecific measures as rest, digitalis, diuretics, etc.

DIAGNOSIS OF THE TERMINAL LESIONS

Diagnosis of the terminal lesions of syphilitic cardiovascular disease, aortic insufficiency, and aneurysm, rests on the points enumerated above for uncomplicated aortitis, but here is aided and simplified by the presence of the physical signs of an aortic valve leak, or x-ray evidence of aortic aneurysm. In the latter case the lesion is in itself practically pathognomonic and requires no supporting data, not even of syphilis.

TREATMENT

Even though, as C. W. Barnett states,[11] "the beneficial effect of specific treatment on the prognosis of syphilitic aortic insufficiency remains unproved," still much suggestive evidence of its value even in this late stage has been adduced by Moore,[1] Stokes,[10] Reid,[9] Grant,[12] etc., Grant followed for ten years 189 patients with syphilitic aortic insufficiency and aneurysm, one group of whom were given specific treatment and another strictly comparable group were kept as controls. The proportion of his patients in each group, dead, or living and unchanged at the end of ten years, certainly seems to favor the results of specific therapy (Table 3).

The arsenicals, in the face of aortic insufficiency or aneurysm, should be used most cautiously; the initial dose of neo should be reduced to .1 gram and the succeeding doses to not over .3 gram, and this should always be preceded by ten to twelve weekly injections of .1 to .2 gram of bismuth and by potassium iodid. If there are no untoward results, about three such courses of neo and bismuth may be given in the first eighteen months, but no rigid schedule can be followed.

In the face of frank decompensation with swollen legs, orthopnea, and hydrothorax, or in patients who have frequent, severe, and easily provoked anginal attacks, the first thought is not of specific, but rather nonspecific measures, of which

Table 3.—*Effect of Specific Treatment on Syphilitic Aortic Insufficiency and Aneurysm Over a Period of Observation of Ten Years. (Modified, from Grant.)*

GROUP 1 No Specific Therapy		GROUP 2 Treated with Arsenic, Mercury, and K1	
Number of cases	46	Number of cases	52
Cases living uneventfully and unchanged	7 (15%)	Cases living uneventfully and unchanged	12 (23%)
Deaths	31 (67%)	Deaths	25 (48%)

bed rest is preëminent. In edematous patients intravenous salyrgan is particularly apropos, being both a diuretic and a mercurial. Unless the patient reaches a stage of compensation through these means, allowing him to be up and about at least a few hours a day without gross edema, severe dyspnea, or frequent and severe anginal attacks, we feel that the arsenicals are contraindicated. However, the heavy metals and iodids can always be started as soon as full digitalization, the tapping of effusions, the administration of oxygen, etc., have alleviated the pressing symptoms of decompensation.

SUMMARY

1. The incidence of syphilis in one thousand consecutive ambulatory patients seen in the private practice of cardiology was 3.4 per cent, and of cardiovascular syphilis 3.2 per cent.

2. Of these 43.6 per cent had simple aortitis, 34.4 per cent aortic insufficiency, and 22 per cent aneurysm.

3. The blood Wassermann or Kahn was positive in 87.5 per cent and negative in 12.5 per cent.

4. For practical purposes a diagnosis of cardiovascular syphilis is justifiable in any patient with a saccular aortic aneurysm; or in any patient over forty years of age with aortic insufficiency and a positive Wassermann, provided there is no stenosis of any valve nor definite history of rheumatic fever;[8] or in any patient with a positive Wassermann or Kahn, especially if he is under fifty years of age and complains of substernal pain or dyspnea on exertion, in whom x-ray shows an aortic shadow wider than one would expect for his age, or blood pressure, or who has a localized dilatation of the ascending aorta, often best seen fluoroscopically in the left anterior oblique position.

5. Adequate treatment of early syphilis is extremely effective in the prevention of clinical cardiovascular syphilis.

6. In the presence of established cardiovascular syphilis the preponderance of evidence (although not strictly applicable to statistical analysis) is in favor of the beneficial effect of specific therapy, not only with the heavy metals and iodid, but also with arsenicals in suitable dosage.

7. The earlier in the course of the disease specific therapy is begun, particularly before the onset of aneurysm or aortic insufficiency, the better are the chances of improvement.

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REFERENCES

1. Short, J. J., and Kelley, M. J.: New England Jr. of Med., 210:417 (Feb.), 1934.

2. Carter, E. P., and Baker, B. M., Jr.: Certain Aspects of Syphilitic Cardiac Disease, Bull. J. H. Hosp., 48:515, 1931.

3. Kiser, E. F., and Bohner, C. G.: Incidence of Syphilis in Private Practice, J. A. M. A., 90:1631, 1933.

4. Moore, J. E., M. D.: The Modern Treatment of Syphilis. Published by Charles C. Thomas, 1933.

5. Warthin, A. S.: The Persistence of Active Lesions and Spirochetes in the Clinically Inactive or "Cured" Syphilis, Am. Jr. of Med. So., 152:508, 1916.

6. Lander, E.: Die Häufigkeit der Luetischen Organveränder ungen insbesondere der Aortitis Luetica, Med. Woch., 73:1782, 1926.

7. Moore and Danglade: Diagnosis of Syphilitic Aortitis Uncomplicated by Aortic Regurgitation or Aneurysm, Archives of Int. Med., 49:753-766 (May), 1932.

8. Levine, S. A.: The Diagnosis of Syphilitic Aortitis with Negative Wassermann Reaction, Amer. Heart Journal, 6, 1930.

9. Reid, W. D.: The Diagnosis of Cardiovascular Syphilis—Analysis of Clinical and Postmortem Findings, Amer. Heart Jr., 6:91, 1930.

10. Stokes: Modern Syphilology. Published by W. B. Saunders Company. Second edition. 1934.

11. Barnett, C. W.: Effect of Specific Treatment on the Prognosis of Syphilis of the Cardiovascular System, Archives of Dermat. and Syph., 281:9, 1933.

12. Grant, R. T.: After-Histories for Ten Years of One Thousand Men Suffering from Heart Disease, Heart, 16:275, 1933.

DISCUSSION

John J. Sampson, M. D. (490 Post Street, San Francisco).—The difficulties of diagnosing early cardiovascular syphilitic lesions, especially in patients with negative serologic tests, and the effect of adequate treatment in preventing cardiovascular syphilis, have been indicated by Doctor Newman.

One of the most serious diagnostic problems is the patient with arteriosclerotic or rheumatic heart disease and a positive blood Wassermann reaction. In my belief these cases should be treated just as are those of well-established syphilitic heart disease. Just what method of treatment should be used in clearly diagnosed syphilitic aortic insufficiency, or aortitis, is a problem in constant dispute. From personal experience, and that of the workers quoted by Doctor Newman, a more optimistic attitude toward results of active treatment may be assumed. At least a prolongation of life seems to be established by statistical studies. Naturally patients with large obstructing aneurysms, or in marked congestive heart failure, are not given arsenical treatment; but I believe that aortic dilatation or aortic valve insufficiency in themselves are not contraindications. An apparently good rule is to attempt to save any cardiovascular system that is maintaining the patient in social usefulness.

The elements of danger in adequate arsenical treatment of cardiacs may be enumerated as: (1) serious nitrotoid reactions; (2) pulmonary edema; (3) Herxheimer reactions; and (4) the dissolution of an aneurysm wall with rupture. The first element, nitrotoid reaction, may generally be prevented by initiating arsenical treatment with small doses, as suggested by Doctor Newman; the second, pulmonary edema, is an uncommon complication of any type of intravenous therapy, and has been observed twice in my personal experience during arsphenamin administration; the third, the Herxheimer reaction, is another rarity, and personally observed only once, and that in a case following preliminary mercury and iodid therapy as generally advised and outlined in Doctor Newman's paper; the fourth, aneurysm rupture, is the most commonly feared complication, but the one which is unsubstantiated by practically any pathologic proof.

It is well recognized that untreated syphilitic cardiovascular disease may advance very slowly, but certainly this is not a general observation. Thus, with little danger in active treatment and the suggestive evidence that arsenical therapy holds the disease stationary, we have good reason for using it even in reasonably advanced cases. The prevention of advancing destruction of the myocardium seems to me a logical explanation of the apparent benefits.

At the cardiovascular clinic of the University of California, we have encountered a mortality of 25 per cent in eighty-seven cases, over a thirteen-year period. We have observed in this group cases of aortic insufficiency which have been clinically stationary or improved during five to twelve years of active treatment, including twenty-five to eighty doses of neosalvarsan in addition to bismuth, potassium iodid, and mercury. No fatal nitrotoid reactions or ruptured aneurysm following arsenical injections were observed in the entire period. We have seen, likewise, cases progress to rapidly fatal terminations during persistent treatment. In spite of this I feel that the disease has often been held in check.

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C. W. Barnett, M. D. (Stanford University Hospital, San Francisco).—Autopsy reports show evidence of aortitis in a large percentage of patients with supposedly latent syphilis, but only a few of these patients ever develop serious disability. The problem in simple aortitis is, therefore, not to make a diagnosis of a condition which is present in nearly every patient with syphilis, but to pick out from the whole group those in whom the process is likely to advance. The signs and symptoms mentioned by Doctor Newman are undoubtedly useful for this purpose. There is, however, a good deal of uncertainty as to the prognosis, and because of this the beneficial effects of treatment have not been proved.

When aortic regurgitation of aneurysm complicates the picture, the diagnosis is more certain and the prognosis is better known; but the effects of treatment are still doubtful. The results of treatment as shown by Grant are given in this paper. These figures are apparently more accurate than any others that have been published up to the present time. They suggest that specific therapy does improve the prognosis slightly in these more advanced stages of the disease.

* * *

George V. Kulchar, M. D. (450 Sutter Street, San Francisco).—At the present time the value of specific treatment in cardiovascular syphilis is debatable. The apparently satisfactory results cited by Moore and his coworkers as evidence of the value of specific treatment is open to the criticism of analysis by the retrospective method. That is to say, patients who lived the longest following the beginning of treatment naturally received the greatest amount of therapy and fell into the "satisfactory outcome group." On the other hand, the patients who died within a few weeks following the beginning of treatment were placed in the "unsatisfactory outcome group." This method of analysis gives rise to a considerable error. As pointed out by Barnett, the only method by which the effect of treatment can be definitely evaluated is by careful observation of a large number of patients until death, half the series receiving specific treatment, and the other half no specific treatment. Every alternate patient, regardless of the stage or severity of the disease, should be used as a control. It is only through a survey by this method, made over a period of years, that the actual value of specific treatment in cardiovascular syphilis can be determined. Regardless of the effect of treatment on the ultimate outcome in cardiovascular syphilis, the symptomatic relief obtained is often striking. I agree with Doctor Newman that treatment should not be started in the presence of frank cardiac decompensation; rather all efforts should be directed toward restoring compensation. Digitalis, except when auricular fibrillation is present, is of little value. Preliminary preparation with mercury succinimid in one-sixth grain doses, given intramuscularly three times a week along with potassium iodid by mouth, is most important in the treatment of cardiovascular syphilis. After four to six weeks of such preparatory treatment, the arsphenamins may be used, as suggested by Doctor Newman. Except in early aortitis, neoarsphenamin is preferred to aresphenamin. Another drug which has a definite place in the treatment of aortic insufficiency and aneurysm is bismarsen (bismuth arsphenamin sulphonate). Many syphilologists, including Stokes, maintain that it is the drug of choice. The low toxicity, the therapeutic efficiency, and marked tonic effects make bismarsen particularly adaptable to the treatment of cardiovascular syphilis. It is well tolerated, even by the most debabilitated cardiac. It should be given in an unbroken series of from forty to eighty intramuscular injections at five- to seven-day intervals. Bismarsen deserves wider popularization in the treatment of cardiovascular syphilis.

BILATERAL DISLOCATIONS OF THE CERVICAL SPINE*

By Ralph Soto-Hall, M.D.
and
Keene O. Haldeman, M.D.
San Francisco

Discussion *by Don King, M.D., San Francisco; Rodney F. Atsatt, M.D., San Francisco; Howard W. Fleming, M.D., San Francisco.*

It is our purpose to review the subject of bilateral or complete dislocations of the cervical spine, leaving aside any discussion of the so-called unilateral cases. Many of the large series of cases of cervical injury reported in the literature are composed chiefly of unilateral dislocations, in which treatment is simpler and the results much better. The reduction and postoperative care of these unilateral cases is a problem of an entirely different nature. In the bilateral dislocations serious injury to nerves, vertebrae and intervertebral discs, and recurrences and residual mechanical arthritis, are common.

In order to obtain a true cross-section and clear understanding of these problems, we have reviewed a series consisting of forty cases from our private practice and from clinics served by us, and have included eight cases from the files of the Industrial Accident Commission. The latter are particularly valuable in that they show end-results with the percentage of permanent disability and the corresponding monetary loss.

REVIEW

One of the early advances in the reduction of these injuries was the method of manipulation devised by Walton.[1] This is chiefly applicable to the unilateral dislocations, and is carried out by bending the head backward and to the side away from the lesion, thus increasing the deformity. The next maneuver consists of a rotation of the head toward the side of the lesion, which permits the dislocated facet to drop into place.

In the bilateral, forward, dislocations, the foregoing method has been largely replaced by that of Taylor [2] in which reduction is accomplished by traction, hyperextension and gentle manipulation, followed by immobilization of the neck in plaster. This treatment will be described later in detail. Fleming [6] has made use of lumbar puncture and manometric estimations, in association with the Taylor manipulation of cervical dislocations to determine the disappearance of subarachnoid block. Such a disappearance of block was thought to indicate a reduction of the dislocation. The symptoms of severe injury to the spinal cord, often associated with cervical dislocation, have inclined some surgeons to advocate *early* laminectomies in the hope of relieving pressure on the cord. This treatment received experimental support in the work of Allen,[3] who did laminectomies

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Read before the General Surgery Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13 to 16, 1935.

TABLE 1.—*Sex Incidence*

	No. of Cases	Percentage
Male	33	82½
Female	7	17½

in dogs following the production of injuries to the cord, and observed better recoveries in the dogs in which the dura had been opened, as compared with nonoperated controls. Coleman[4] used the Queckenstedt test for subarachnoid block (spinal puncture and jugular compression) to determine the advisability of early laminectomy. The disastrous experiences of Taylor and other surgeons who opened the dura following cervical dislocations, has caused a trend toward conservative treatment. Towne,[5] in a recent review, concluded that "laminectomy can do no good in cases of injury of the spinal cord resulting from dislocation of the spine, and may do harm."

In the past five years several large series of cases of cervical dislocation have been reported. Langworthy[7] cited thirty personal cases, of which seventeen were bilateral dislocations. Of the latter patients, five died and one of the surviving patients had a recurrence of the dislocation. A comprehensive analysis of forty-eight patients having various types of injury of the cervical spine was presented by Mackh[8] from the Harbor Hospital in Hamburg. He found the mortality rate to be 5 per cent in patients with partial dislocation, and 30 per cent in those with total dislocations. Brookes,[9] in 1933, reported forty cases of cervical dislocation, of which number, eleven were bilateral dislocations. Complete reduction was obtained in twenty-eight, partial reduction in eight, and failure resulted in one case. No attempt was made to reduce the dislocation in three patients. Redislocation occurred in four patients (10 per cent). The same author[10] brought his series of traumatic dislocations of the neck up to sixty-five in 1935.

From an inspection of the illustrations in the papers mentioned in the preceding paragraphs, it is apparent that many cases which were considered reduced actually showed the persistence of a slight forward displacement of the vertebra. This incompleteness of reduction predisposes to a recurrence of the dislocation, or at least leads to persistent symptoms of damage to the nerve roots, and arthritic changes. We must raise our standards of satisfactory reduction, and must insist upon a perfect realignment of the anterior borders of the vertebrae.

TABLE 2.—*Age Incidence*

	No. of Cases	Percentage
0- 9 years	4	10
10-19 years	4	10
20-29 years	4	10
30-39 years	12	30
40-49 years	9	22½
50-59 years	6	15
60-69 years	1	2½

TABLE 3.—*Causative Mechanism*

	No. of Cases	Percentage
Automobile accident	15	37½
Fall on head or neck	11	27½
Dive into shallow water	4	10
Fall while intoxicated	4	10
Blow on head or neck	3	7½
While under anesthetic	1	2½
Manipulation by cultist	1	2½
Sudden movement of head	1	2½

ANALYSIS OF FORTY CASES OF BILATERAL DISLOCATION OF CERVICAL SPINE

In this series of forty cases males constituted 82 per cent of the patients (Table 1), an incidence which is characteristic of injuries occurring largely in industry and sports. The decades from thirty to forty, and from forty to fifty, contained the largest number of cases, the average age being thirty-five years (Table 2).

While a large variety of causes of dislocation were found, automobile accidents were in preponderance (Table 3). Diving into shallow water accounted for four such injuries, and falls for most of the remainder. The most vulnerable vertebra (Table 4) appeared to be the fifth cervical, followed in order by the sixth, fourth, and first cervical vertebrae. The latter localization occurred in the younger patients (average age twenty-five years). Fractures of the vertebral body or some portion of the neural arch were associated with the dislocation in one-half of the series. This incidence is probably larger because minor fractures are often overlooked.

The symptoms and signs associated with dislocations of the neck may be grouped as local signs (torticollis, limitation of motion, pain in

TABLE 4.—*Level of Dislocation and Associated Fractures*

	No. of Cases	Percentage
C I	5	12½
C II	3	7½
C III	3	7½
C IV	6	15
C V	13	32½
C VI	9	22½
C VII	1	2½
Associated fracture of vertebral body or neural arch	20	50

TABLE 5.—*Permanent Disability Following Dislocation of Cervical Spine*
(From Files of California Industrial Accident Commission 1926-1934)

Age	Nature of Injury	Treatment	Permanent Rating		
			Per Cent Disability	Weeks	Cost
38	Compression fracture C V with slight displacement	Bed rest for twenty-five days	43¼	161	$3,350
38	Dislocation C VI Fracture C VII	Not diagnosed and not treated	55	220	$4,582
48	Dislocation C II	Traction two weeks, collar one year	32¾	131	$2,728
43	Dislocation C IV Compression fracture C V	Undiagnosed for four months. No treatment	....	......	$2,400
42	Dislocation C VI Compression fracture C V and VI	Manipulation followed by cast for three months	....	......	$5,050
53	Dislocation C V	No manipulation, cast ten weeks	59½	238	$3,175
32	Dislocation C VI	Manipulation, cast one month	59	235	$4,559
34	Dislocation C IV Fracture C V	Head traction one week followed by physiotherapy	58¾	......	$5,078
		Average	51%		$3,865

the neck), symptoms of injury to nerve roots (paresthesias and anesthesias over shoulders and arms), and those of injury to the spinal cord. Symptoms of the latter were noted in twenty-five patients, consisting, in the order listed, of paralysis of the arms, anesthesia and paralysis of the legs.

No specific treatment was characteristic of this series. Usually a manipulative reduction was carried out, followed by the application of a cast including the body and neck. Open reduction or laminectomy was performed on seven patients for correction of deformity or relief of pressure on the spinal cord.

In such a study as this, the results are difficult to interpret, owing to the incomplete follow-up notes in some of the clinic cases. The private cases showed, in most instances, a complete recovery within from six to eight months after the injury. Results in clinic cases were often less gratifying because recurrence was more common and there was a less rigid supervision of their after-care. As a rule, there was gradual disappearance of symptoms of injury to the spinal cord, although some weakness, anesthesia or paresthesia often persisted indefinitely. Pain arising in the nerve roots was particularly annoying in certain patients who had not received early and adequate treatment.

A recurrence of the dislocation following reduction was noted in four patients. Death within a few days of the accident occurred in seven instances. Of special interest is the expression of end-results as observed in the record of eight patients with cervical dislocation who received permanent disability ratings by the Industrial Accident Commission of California in the years 1926-1934 (Table 5). The average permanent disability rating was 51 per cent, with an average cash payment of $3,865. These figures emphasize the tremendous physical and financial loss which results from such injuries, many of which did not receive an early diagnosis and few of which were given adequate treatment. Indeed. the medical records in almost all of these eight cases indicated an incomplete reduction or a recurrence of the dislocation.

TREATMENT

It need hardly be emphasized that the foremost consideration in the care of patients with fracture-dislocation of the cervical spine is the immediate reduction of the dislocation. With proper care in handling, such a reduction can be carried out without anesthesia and without jeopardizing the life of the patient. Early diagnosis and prompt treatment will greatly lessen the duration and extent of disability, since the edema and compression of the spinal cord caused by the displacement of the vertebra are the chief complications of such injuries.

We believe that the Taylor method of manipulation, followed by the type of immobilization to be described, offers the most satisfactory solution of this problem. The patient is placed on his back on any type of rigid table, and a head sling of muslin is so arranged that one loop rests upon the patient's chin and the other loop beneath his occiput. The ends of the sling are passed around the waist of the surgeon and tied. This permits the latter to maintain constant traction on the head by resting his weight against the sling, and at the same time leaves both his hands free to carry out gentle manipulation of the patient's neck (Figure 1). A steady downward pull on each of the patient's arms, by assistants, provides the necessary countertraction. Traction on the head is maintained for at least fifteen minutes to permit relaxation of the cervical muscles. The dislocated facets can often be felt to slip into place, and the patient may note immediate relief. The manipulation consists of a gradual increase in extension of the neck combined (in patients having torticollis) with Walton's maneuver of lateral flexion to increase the deformity, followed by rotation away from the deformity. When a satisfactory reduction seems to have been accomplished, this

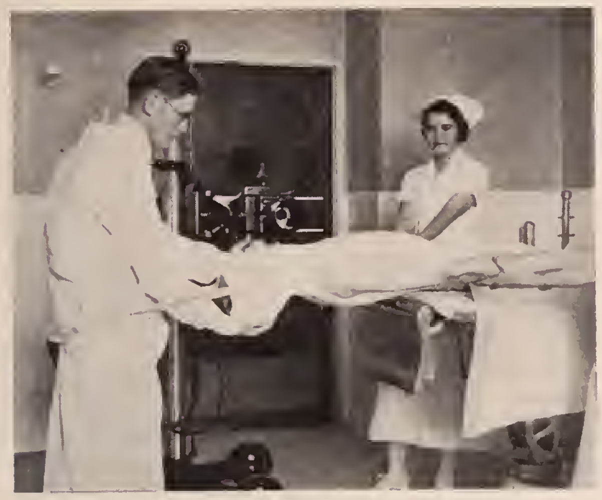

Fig. 1.—Taylor method of reduction of cervical dislocation. Note the portable x-ray unit.

position should be checked by a fluoroscopic examination or a film taken with a portable x-ray unit. After reduction has been proved, a cast is applied which includes the chin and occiput, and extends down to the iliac crests, with the neck in complete hyperextension. Because of the high incidence of recurrence, even with a cast such as this, we have recently incorporated two small turnbuckles in the cast, extending from the region of the middle of each clavicle to the side of the chin. The oblique position of the two turnbuckles prevents lateral motion of that portion of the cast which supports the chin (Figure 2). If subsequent x-ray films, which are taken at intervals of two or three days, show any slipping forward of the injured vertebra, the cast is cut in a transverse direction anteriorly to include two-thirds of the circumference of the neck, and increased extension of the neck is obtained by means of the turnbuckles. Thus recurrent dislocation is reduced or prevented."

The first cast is worn for from eight to twelve weeks and is followed by a Thomas collar for about four weeks longer, the length of immobilization depending upon the severity of injury and upon the evidence of repair given by the x-ray. After two or three months the latter often shows a solid bridge of bone extending from the anterior border of one vertebra to another at the site of dislocation.

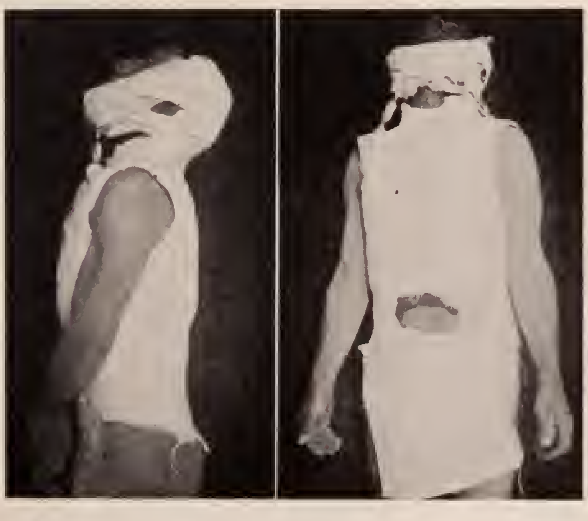

Fig. 2.—Lateral and anterior views of cast, with turnbuckles to provide adaptable hyperextension of the neck.

REPORT OF CASES

A few cases treated by various methods have been selected for special study because they illustrate the problems presented by these injuries and point the way to a rational method of treatment.

* * *

Case 1.—J. M., male, fifty years of age, had his chin caught beneath the wheel of an overturned automobile. There was immediate and complete paralysis and anesthesia from the shoulders down. Lumbar puncture showed a blood-tinged spinal fluid and an incomplete block. An attempt was made to reduce the complete dislocation of the sixth cervical vertebra, with partial success, but with no improvement of neurologic signs. The patient expired three days after the injury. It is evident that the spinal cord was completely severed by the injury, and that any treatment was hopeless.

* * *

Case 2.—J. D., male, fifty years of age, was thrown on his neck when an automobile overturned. He had immediate pain in the back of the neck, and numbness and tingling of both arms, indicating pressure on the nerve roots. An x-ray examination showed a dislocation of the fifth cervical vertebra and a fracture through the laminae of the neural arch. The dislocation of the fifth cervical vertebra was reduced by traction on the head under the fluoroscope, with immediate relief of pain in the arms, and a cast was applied. A few days later the pain in the arms recurred, and a lateral radiogram showed that the fifth cervical vertebra had again slipped forward. Later attempts to reduce this recurrence were only partially successful.

This case demonstrates the necessity for immobilization of the neck in complete hyperextension, which had not been done. The associated fracture of the neural arch also favored a recurrence of the dislocation.

* * *

Case 3.—F. R., male, thirty-five years of age, injured his neck in an automobile accident. He complained only of pain in the neck, and a neurologic examination was negative. Two days later the x-ray revealed a dislocation of the fourth cervical vertebra. This was reduced by traction on the head for twenty minutes, followed by the application of a cast. Two weeks later another radiogram revealed the recurrence of the dislocation. An open reduction was carried out, and the fourth cervical spinous process was wired to that of the sixth cervical in the hope of preventing another recurrence. Films taken two months later showed a definite increase in the displacement of the fourth cervical vertebra.

This case also illustrates the need for hyperextension after reduction and shows the futility of an attempt to prevent displacement of an imperfectly reduced vertebra by means of internal fixation.

* * *

Case 4.—E. A., male, seventeen years of age, dived into shallow water. He had a complete quadriplegia which cleared up following manipulation under anesthesia. The reduction was followed by a cast to the chest and neck for seven weeks, after which a very ineffective metal collar was worn. The weakness of all four extremities gradually increased, and at the time of examination by Dr. Howard Fleming and one of the authors, fourteen weeks after the injury, there was almost complete quadriplegia. Radiograms showed a severe compression fracture of the fourth cervical vertebra, with dislocation of the third cervical vertebra, producing a sharp backward angulation of the spine at that level. A laminectomy was performed, and the spinal cord, which was compressed against the body of the fourth cervical vertebra, began to pulsate when the laminae were removed. After the laminae had been removed, it was impossible to obtain any correction of the deformity, even with strong traction on calipers fixed in the mastoid region. The patient began to improve immediately after the operation, and showed a progressive return of strength to all extremities over a period of two years.

Recurrence because of inadequate immobilization is again shown, and the value of *late* laminectomy to relieve pressure on the spinal cord is demonstrated.

* * *

Case 5.—H. de M., female, thirty-five years of age, was injured in an automobile accident. She presented a flaccid paralysis and anesthesia of the right arm. A dislocation of the fourth cervical vertebra was completely reduced by steady traction for twenty minutes, followed by hyperextension of the neck. The hyperextended position was maintained by a cast extending from the iliac crests to the head. Immediately after reduction, power returned to the right arm, and the sensory disturbance gradually disappeared. The patient made a complete recovery.

* * *

Case 6.—B. F., thirty-seven years of age, was injured in an automobile accident. In addition to an injury to the neck, she sustained a dislocation of the hip which was reduced at once. No radiograms of the neck were made until six weeks after the accident, when they showed a dislocation of the fifth cervical vertebra. She presented a marked limitation of the movement of the neck and pain over the distribution of the cervical nerves. Reduction of the dislocation was accomplished by gradual hyperextension of the neck as the patient lay on a Bradford frame, and traction for twenty-four hours was maintained with a head halter. The neck was then immobilized in a long cast, in which a turnbuckle was incorporated to permit a gradual increase in the degree of hyperextension, in the manner previously described. The patient made a complete recovery within three months of the institution of treatment.

* * *

Case 7.—R. T., male, three and one-half years of age, fell out of a tree. His mother observed a marked torticollis and forward inclination of the neck, but was sure no serious injury had occurred because the boy's appetite was unimpaired. One week later, however, an x-ray examination showed a dislocation of the second cervical vertebra. The neck was quite rigidly held in forward flexion, but a neurologic examination was negative. The Taylor type of manipulation under anesthesia gave a complete reduction of the dislocation. Immobilization of the neck in hyperextension was maintained with a long cast to which two turnbuckles were attached. No signs of injury were present four months later.

* * *

Case 8.—S. S., male, forty-five years of age, was thrown from a mowing machine. He experienced pain in the neck and right arm, and weakness of both arms. These symptoms persisted without treatment until our examination four weeks later, which showed a dislocation of the fifth cervical vertebra and a fracture of its spinous process. Treatment at the time consisted of continuous traction for one day followed by manipulation of the neck without anesthesia. The dislocation was reduced, after which a cast was applied from the iliac crests to the head. A few days later the x-ray showed a partial recurrence of the dislocation, which was corrected by cutting the cast anteriorly at the level of the fracture, attaching two turnbuckles to the cast from shoulder to chin and gradually increasing the extension of the neck until full hyperextension was attained. This immobilization was continued for three months, after which a metal collar was worn for one month. A radiogram then showed a firm bridge of bone connecting the anterior surfaces of the fifth and sixth cervical vertebrae. Six months after the beginning of treatment, the neck had a normal range of motion, although the patient still complained of occasional slight pain in the neck, which was probably the result of arthritic changes.

CONCLUSIONS

1. Dislocations of the cervical spine, with or without associated fractures, demand immediate reduction and prolonged immobilization of the neck in hyperextension.

2. Failure of early diagnosis and adequate treatment results in permanent disability, because of arthritic changes in the spine and compression of the nerve roots or spinal cord.

3. A method of postmanipulative immobilization is described, which consists of the attachment of small turnbuckles to a long plaster jacket and collar in such a way as to permit a gradual increase in the hyperextension of the neck.

4. A series of forty cases of bilateral dislocation of the cervical spine is analyzed with regard to incidence, localization, causation, treatment, and final results.

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REFERENCES

1. Walton, G. L.: A New Method of Reducing Dislocation of Cervical Vertebrae, J. Nerv. and Ment. Dis., 20:609, 1893.

2. Taylor, A. S.: Fracture Dislocation of the Neck—A Method of Treatment, Arch. Neurol. and Psychiat., 12:625, 1924.

3. Allen, A. R.: Surgery of Experimental Lesion of Spinal Cord Equivalent to Crush Injury of Fracture Dislocation of Spinal Column, J. A. M. A., 57:878, 1911.

4. Coleman, C. C.: Determination of Local Compression as an Indication for Laminectomy in Acute Injury of the Spinal Cord, J. A. M. A., 85:1106, 1925.

5. Towne, E. B.: Injuries of the Spinal Cord and Its Roots, Following Dislocation of the Cervical Spine, Surg. Gynec. and Obst., 57:783, 1933.

6. Fleming, H. W.: Spinal Cord Injuries—Their Treatment, Cal. and Western Med., 42:363 (May), 1935.

7. Langworthy, M.: Dislocations of the Cervical Vertebrae, J. A. M. A., 94:86, 1930.

8. Mackh, E.: Teilweise und vollständige verrenkungen und Brüche der Halswirbelsäule und ihre Spätergebnisse, Deutsche Ztschr. f. Chir., 241:695, 1933.

9. Brookes, T. P.: Dislocations of the Cervical Spine, Surg. Gynec. and Obst., 57:772, 1933.

10. Brookes, T. P.: Dislocations of the Cervical Spine—Some Predisposing Causes, J. A. M. A., 104:902 (March 16), 1935.

11. Soto-Hall, R.: Recurrence in Dislocation of the Cervical Spine, Jour. Bone and Joint Surg., 17:902 (Oct.), 1935.

DISCUSSION

Don King, M.D. (Stanford University School of Medicine, San Francisco).—In cervical spine dislocations, accurate anatomic reduction and prolonged retention are essential for proper function, comfort, and stability. Since Taylor first described his manipulative technique, there has been a gradual acceptance of the fact that reduction can be safely and efficiently accomplished by manipulation. The discomforts and difficulties of traction in the overcorrected position have led to a more general use of the plaster cast to maintain reduction and hasten ambulation. As the authors have pointed out, recurrence of the dislocation, in spite of the plaster cast, is prone to take place. Anyone who has had the disconcerting experience of a recurrence will welcome the authors' suggestion of using turnbuckles in the cast to maintain and increase the hyperextended position of the cervical spine.

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Rodney F. Atsatt, M. D. (1421 State Street, Santa Barbara).—Doctors Soto-Hall and Haldeman are to be commended for bringing up this timely subject. It is often a serious question deciding what to do at the critical time in order to conserve bone structures, nerve structures, or life itself. The clear review of methods of handling these difficult injuries is very valuable.

May I emphasize several points which have already been made but which, to my mind, are important in treatment?

The first is early and accurate diagnosis; this is often hard to achieve because of the difficulties of x-ray technique, especially in the lower cervical region.

The second point is gentleness in manipulation. If the laminae are intact the dislocation must be reduced, but certainly not by "unskilled labor," as life often hangs by a precarious thread during these moments.

The third point is the authors' very ingenious device for maintaining hyperextension, by use of turnbuckles; an old principle, with a new application. This should give excellent results.

In listening to their paper, however, I miss the mention of traction in the treatment of certain types of fracture dislocations. Traction in hyperextension with the old Sayre sling halter or one of the newer modifications is a method which must never be forgotten.

There is another thing which I would like to bring to your attention: occasionally we see a case where ultraconservatism seems to be indicated. As an example of this type of injury, I would like to present one case.

Male, aet. 55, CWA employee. While working on a steep bank, a root upon which he was pulling gave way, allowing him to roll and fall about 25 feet. He sustained a forward dislocation of the second cervical vertebra on the third, a transverse fracture of both laminae in the mid-portion, and a chip fracture of the anterior edge of the body of the third. There was only local pain—absolutely no cord symptoms. Manipulation might have been productive of a reduction, depending upon whether or not the anterior ligaments were intact. However, I felt that while the persistence of the dislocation of the body would give some residual stiffness, the natural laminectomy which had been performed had better be left alone, and this was done. Head traction, eight weeks' metal collar and adequate intensive physical therapy for four weeks, back to light work in three months, and full work as laborer in four and one-half months with very little loss of mobility in the neck.

This case also brings up the question of physical therapy. It seems to me there is no step in the care of these cases of more importance than that given by an adequately trained physical therapist, one who knows and understands muscle reëducation. I am sure that the authors will agree that such rehabilitation is of utmost importance in cases involving joints, muscles, and ligaments.

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Howard W. Fleming, M. D. (384 Post Street, San Francisco).—The paper by Doctors Soto-Hall and Haldeman gives emphasis as to the necessity of early reduction and proper support in cases of cervical spine dislocation.

The complication in such cases that gives most concern is the damage to, or continued pressure on the spinal cord. We have found it advantageous to combine the Queckenstedt test with the Taylor manipulation. Our primary object is not to use the test to determine anatomical reduction of the dislocation, as is suggested in the text of this paper under discussion. Frequently, it is possible to predict satisfactory reduction by what one hears and feels in the patient's neck, and also by the reappearance of normal reactions to jugular compression. However, satisfactory anteroposterior and lateral x-rays are necessary to confirm a proper reduction.

We have found that certain positions will cause or relieve pressure on the cervical cord, sufficient to obstruct or open the cervical canal. We feel that manipulation can be done with greater safety if one has some gauge as to what pressure, if any, is being excited on the cervical cord. The number of cases when manipulation caused a sudden onset of paraplegia or death are probably far greater than the literature would suggest.

If one finds a complete block that cannot be relieved by gentle changes in the position of the head and neck, one must conclude that pressure on the cord is great or that edema of the cord is extreme. To continue strenuous manipulation in such cases is to invite further injury of the cord. We feel it far safer to maintain traction, with calipers placed in the skull, and do an open reduction and decompression.

The recurrence of dislocation is fairly common, and the author's use of turnbuckles incorporated by a cast is very ingenious. Our experience has been that the patient can seldom tolerate the pressure of a halter on the chin and back of the head. Skeletal traction causes little discomfort, and effective halter traction can be secured in a proper direction to maintain reduction.

PYODERMATOSES*

By Nelson Paul Anderson, M.D.
and
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Los Angeles

Discussion *by Ernest Dwight Chipman, M. D., San Francisco; Franklin I. Ball, M. D., Los Angeles; Sophie A. Lurie, M. D., Los Angeles.*

The purpose of this paper is to discuss some of the pyogenic infections of the skin. These form a distinct group from an etiologic standpoint, being produced by organisms which have the skin as their normal habitat. The diagnosis of these conditions in most cases offers no particular difficulty. In some of them, such as impetigo, therapy offers no great problem, while in others, such as sycosis, even persistent treatment carried out over a period of years may fail to effect a cure. It is our desire, in presenting this subject, to stimulate discussion of the pyodermas and especially those characterized by their refractoriness to present-day therapy.

IMPETIGO CONTAGIOSA

The common types of impetigo contagiosa require no discussion in a paper of this type. Mention should be made of the annular or circinate type, which is so often mistaken by the general practitioner for a ringworm infection. The generalized bullous type of impetigo is infrequent, and even when it does occur we are perhaps too prone to consider the condition a pemphigus.

It is the secondary or consecutive types of impetigo which are sometimes very misleading. Thus we see an impetigo of the nape of the neck secondary to pediculosis capitis; an impetigo of the hands, or one that is fairly well generalized, is often seen as a complication of scabies. Such a secondary pyodermia may be so severe as to mask entirely the essential underlying condition. Many cases of dermatitis venenata, eczema, epidermophytosis, herpes simplex, and insect bites may present a secondary impetigo.

Impetigo of the new-born occurs more frequently in the lying-in wards of our hospitals than

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* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

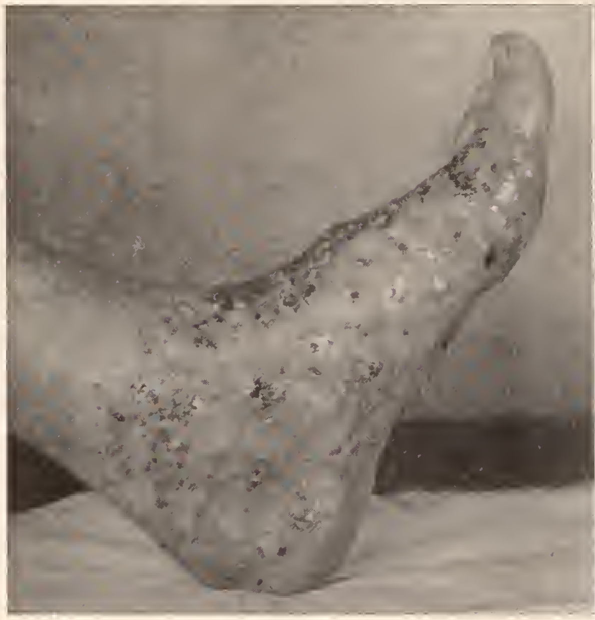

Fig. 1

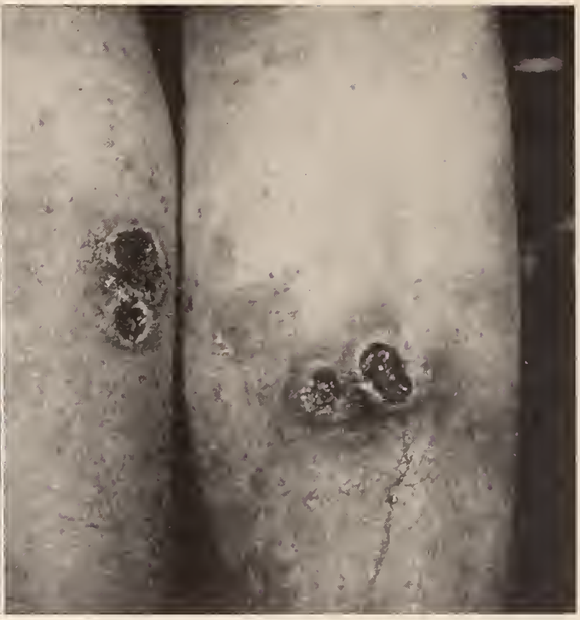

Fig. 2

Fig. 1.—A severe secondary pyodermia of the foot occurring as a complication of an epidermophyton infection.
Fig. 2.—Ecthymatous lesions of the legs. This is primarily an impetigo with deep ulceration.

we are willing to admit. Its complete eradication from a hospital nursery is often extremely difficult. And, further, it is a more frequent cause of infantile mortality than is apparent.

In regard to the therapy of impetigo, a few facts may be mentioned. Amoniated mercury still continues to hold a high position. Generally, its use in strengths of from 3 to 5 per cent is attended by a successful outcome. The use of stronger preparations, such as the official 10 per cent ointment, is often followed by a spreading of the impetigo or the production of a severe dermatitis venenata. We still see cases where tincture of iodin has been used in conjunction with mercurial ointments, with the consequent inevitable mercuric iodid dermatitis.

Sulphur is a much neglected remedy, so far as the pyodermias are concerned. It is of great value in 3 to 5 per cent strengths, not only in the simple impetigos, but particularly in cases occurring as a complication of scabies. Among other remedies which need be only mentioned here are ultra-violet light, x-rays, Alibour water, and the recently introduced preparation of a 1 to 500 solution of metaphen in flexible collodion. A 2 per cent aqueous solution of gentian violet is often of service.

ECTHYMA

Ecthyma may be regarded simply as a deep, ulcerating form of impetigo, usually involving the lower part of the legs. Practically all of the remarks pertaining to impetigo hold true for this condition.

SYCOSIS VULGARIS

This chronic persistent and stubborn perifollicular infection is most generally found on the bearded region of the face. However, it may also involve the eyebrows, eyelashes, scalp, axillae, and pubis.

Produced by the staphylococcus, this disorder takes a high position in its rebelliousness to all forms of therapy. At times it may be cured by the simplest therapeutic measures, while at other times even permanent alopecia produced by x-rays may fail to bring about a cure. In the stubborn cases, manual epilation should be practiced daily. Foci of infection in the nose, sinuses, tonsils, and teeth should be eradicated. It is interesting to note the conflicting advice given regarding shaving in this condition. Andrews[1] specifically states that "Barber's clippers should be substituted for the razor, shaving not being permissible." Ormsby[2] is very emphatic in advising daily shaving. Stelwagon[3] is even more emphatic when he says: "As soon as the inflammatory action has been lessened and, in fact, in almost all cases from the very beginning, shaving every day or every second day should be insisted upon as an essential part of the treatment. This will not be without pain at first, which is by no means unbearable; but after the first two or three shavings the operation is not especially painful. It materially aids in rendering the treatment effective and in shortening the time required for a cure, and this the patient soon recognizes himself. I value this so highly that I should decline to treat a case unless this measure were acceded to."

The recent introduction of oxychlorquinone ointment by Peck of New York represents the only new contribution to this most difficult therapeutic problem. Even this is not to be regarded as curative, for most patients are compelled to use the ointment more or less continuously. The value of x-rays, either in fractional or epilating doses, is often attended by success. Intravenous vaccines in increasing doses, the ultra-violet light in patients who have had the maximum allowable dosage of x-ray, and Alibour water wet dressings, all should

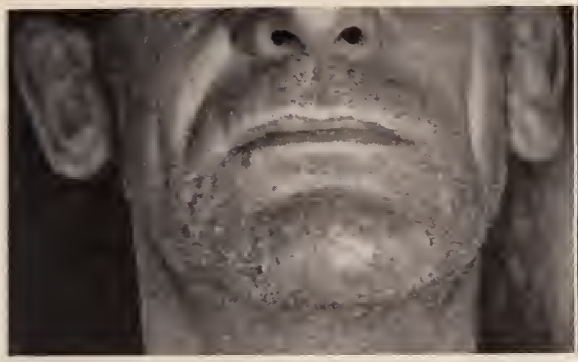

Fig. 3

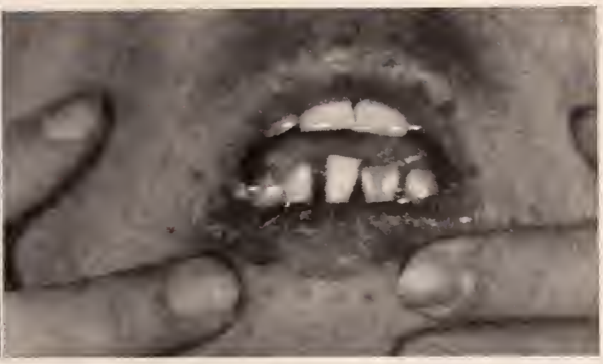

Fig. 4

Fig. 3.—Sycosis vulgaris. A chronic staphylococcus infection of the hair follicles usually involving the bearded region.

Fig. 4.—Pyogenic granuloma of the lip. This diagnosis was substantiated at biopsy. Several physicians had previously diagnosed this lesion as a carcinoma.

be mentioned. Occasionally a 75 per cent aqueous solution of ichthyol will give a striking result.

LUPOID SYCOSIS

This may be considered as a special type of sycosis vulgaris, and is characterized by its extremely chronic course, the presence of small to large atrophic areas of scarring, which are bordered by pustules and crusts. As the process advances, it causes a total destruction of the hair follicles and a permanent alopecia results. A special name is often applied when the eyebrows are alone involved, namely, ulerythema oöphrogenes.

The histologic picture is unique and fairly characteristic, revealing, as Unna pointed out nearly fifty years ago, a practically pure plasmoma.

INFECTIOUS ECZEMATOID DERMATITIS

This is a chronic resistant infectious eczema which often occurs consecutive to a discharging sinus, ulcer or abscess. About the ear it is often associated with a chronic otitis media; about the ankle, with a discharging varicose ulcer; about the face with a chronic discharge from the nose and eyes. Secondary eczematous eruptions occurring in the acute stages of an x-ray burn belong in this group.

Fundamentally, the eruption is probably the effect of an allergic hypersensitivity to toxins or bacteria contained in the irritating discharge from the original focus. The appearance of small grouped vesicles together with linear lesions occurring in scratch marks, its pruritus and, above all, its auto-inoculability and its failure to respond to ordinary measures, are characteristic. In some cases of this disease the ultra-violet light is of considerable value. At other times x-ray therapy is useful. In many of the cases which we encounter, White's Crude Coal Tar Paste has been of great value. Autogenous vaccines and 2 per cent aqueous gentian violet are useful auxillary measures.

GRANULOMA PYOGENICUM

These granulomatous lesions are undoubtedly secondary to an infection produced by the pyogenic cocci. Their pedunculated appearance, the tremendous hemorrhage which occurs when they are traumatized, and their tendency to recur unless completely removed, together with their semi- or apparently malignant appearance, are all factors which have made these lesions a cause of considerable confusion in the minds of all but dermatologists. Thus we frequently see a recurrent pyogenic granuloma of the lip being mistaken for a carcinoma. On the breast they are confused with true malignancies, and when they occur on the conjunctiva, as they undoubtedly do, the ophthalmologist considers them in the angiomatous group.

The importance of having histologic studies made of excised lesions is obvious. Many general pathologists are not at all familiar with the microscopic structure of these lesions, and hence the importance of each dermatologist having a knowledge of their histologic appearance, which is so characteristic.

Excision by the endotherm knife, or complete destruction of the lesion by the electrodesiccating current under novocain, is an accepted and effective treatment.

VEGETATING PYODERMIAS

We have seen one case of a blastomycosis-like lesion on the back of the hand which we feel belongs in this group. No papers on this subject have appeared in the American literature, although cases have been presented by Fox,[4] Schwartz,[5] and Traub.[6] The eruption begins as a small papular lesion, and gradually spreads to involve the dorsum of the hand from the wrists to the proximal phalanges. One or both hands may be involved, and the final picture is that of a chronic verrucus and vegetating, somewhat granulomatous-appearing growth. Clinically, it is very similar to a blastomycotic infection or to a verrucous tuberculosis cutis.

Glasser[7] and Gougerout, among others, have described cases in the French literature. The condition is apparently a vegetating and verrucous pyodermia of streptostaphylococcic origin. Histologic examination has shown a simple inflammatory reaction in the cutis, with an irregular acanthosis, a branching of the rete pegs and a verrucous structure of the epidermis.

RECALCITRANT PUSTULAR ERUPTIONS

Mitchell,[8] Andrews,[9] and Lehmann[10] in the United States, and Barber[11] in England, have been particularly active in calling our attention to a condition characterized by the formation of small vesicopustules symmetrically placed on the palms and soles, and which exhibit a marked stubbornness to practically all forms of treatment. The eruption particularly involves the mid-portions of the palms and the instep of the feet. The lack of involvement of the fingers and toes, and especially of the interdigital spaces, is striking, although occasionally one sees a small group of pustules on the tips of the toes. Eventually, with the drying of the pustules there is a marked and characteristic exfoliation. New attacks and exacerbations occur from time to time, and are characterized by the formation of new pustular lesions either within the patch or at its periphery.

Generally, as pointed out by Andrews, these patients have some obvious focus of infection in other parts of the body, and often this focus is a severe one. One of our patients had a very definite focus of infection in the antrum. In another patient, careful search failed to reveal any such focus.

In general we agree with Andrews that these cases belong in a group by themselves and are probably not pustular psoriasis as maintained by Barber. We also agree that no permanent cure is obtained unless attention is paid to the underlying cause. We do feel, however, that x-ray is a valuable agent of therapy. In addition to x-ray, we also use crude coal-tar paste according to the formula of C. J. White.

℞

Crude coal tar	4
Zinc oxid	2
Cornstarch	15
Petrolatum	15

Anthralin in our hands has proved of no value in these cases.

CONCLUSIONS

1. We have briefly discussed some of the common and acute pyogenic infection of the skin.

2. The more chronic and resistant pyodermias have been briefly discussed, with special reference to treatment.

2007 Wilshire Boulevard.

REFERENCES

1. Andrews, George C.: Diseases of the Skin, p. 515. W. B. Saunders Co., Philadelphia, 1930.

2. Ormsby, Oliver S.: Diseases of the Skin, p. 1208. Lea & Febiger, Philadelphia, 1934.

3. Stelwagon, Henry W.: Diseases of the Ekin, p. 1069. Eighth edition. W. B. Saunders Co., Philadelphia, 1916.

4. Fox, Howard: Verrucous Tuberculoid Pyoderma. Presented before the New York Dermatological Society, November 22, 1933. Reported in Society Transactions, Arch. Dermat. and Syph., 27:1050, 1933.

5. Schwartz, Hans J.: A Case for Diagnosis (Pyodermia?) New York Dermatological Society, February 27, 1934. Reported in Society Transactions, Arch. Dermat. and Syph., 30:591, 1934.

6. Traub, Eugene F.: A Case for Diagnosis (Blastomycosis?). Presented before the New York Academy of Medicine, Section of Dermatology, February 4, 1930. Reported in Arch. Dermat. and Syph., 22:528, 1930.

7. Glasser, R., and Woringer, Fr.: Mycose végétante du dos de la main stimulant une tuberculose verruqueuse, Bull. Soc. Derm. et Syph., 7:1447 (July), 1934.

8. Mitchell, J. H.: Amycotic Dermatoses Stimulating Ringworm and Erosio Interdigitalis Blastomycetica, Arch. Dermat. and Syph., 19:659 (April), 1929.

9. Andrews, George C., Birkman, Frederick W., Kelly, Richard J.: Recalcitrant Pustular Eruption of the Palms and Soles, Arch. Dermat. and Syph., 29:548, 1934.

10. Lehman, C. F.: Acute Vesicular Eruptions of the Hands and Feet, Arch. Dermat. and Syph., 21:449 (Mar.), 1930.

11. Barber, H. W.: Acrodermatitis Continua vel Perstans (Dermatitis Repens) and Psoriasis Pustulosa, Brit. J. Dermat., 42:500 (Nov.), 1930.

DISCUSSION

Ernest Dwight Chipman, M.D. (2000 Van Ness Avenue, San Francisco).—The scope of this paper is so wide that it allows a corresponding amplitude of discussion.

In general, it may be observed that a large percentage of the pyodermata are consecutive to simple pruritus or to a pruritic dermatosis. The impetiginization of a simple eczema and the occurrence of impetigo, ecthyma or furunculosis complicating scabies are familiar examples of this. Largely the lesions are the result of infection through scratching.

As to the causative organisms, it is important to note, particularly if vaccine therapy is contemplated, that impetigo certainly, ecthyma probably, and infectious eczematoid dermatitis possibly are the result of streptococcic invasion, although staphylococci may be also present as secondary invaders. Folliculitis and furunculosis are usually purely staphylococcic in origin.

It is gratifying that the writers advocate the use of mild forms of ammoniated mercury in the treatment of impetigo; also that they warn against the use of mercurials following the application of iodin. I have seen impetigo in infants do very badly on ten per cent white precipitate ointment, and recover promptly when a one per cent salve was substituted. It is astonishing, also, how many patients appear after having made one or more applications of iodin, thinking that probably they were subjects of ringworm.

As to the treatment of impetigo the authors properly emphasize the value of sulphur in some cases. The same result may be reached with a three per cent calomel ointment. By and large, ammoniated mercury is probably the most favored remedy; but whatever the medicament, the final outcome depends largely upon the attention to detail in its application. While it is obvious to us, it is necessary to impress strongly upon the patient the necessity of removing all crusts and the turning back of epidermal collarettes prior to the application of the prescribed remedy.

The authors raise a fine point in the treatment of common sycosis as to the value of shaving. I do not believe a hard-and-fast rule can be drawn; for, while perhaps most cases respond to daily shaving followed by immediate applications of one sort or another, there certainly remains a group of cases in which the defensive forces of nature will do their work if given a fair chance. Lesions which are healing nicely under a crust do better with little interference. In certain cases a nicety of judgment is required, and the ability to determine properly when to interfere and when to refrain, is worth much more than hard-and-fast ruling.

Along the same line the subject of furunculosis should be mentioned. Possibly this topic was not discussed by the authors because it is worthy of an entire paper by itself. As with other pyodermata, furuncles appear as a result of scratching. Almost invariably furuncles involving the nucha denote an itching scalp which has been scratched. Here, besides the attack on the furuncle itself, the scalp and the finger nails should receive attention.

At present the trend seems toward more conservatism in treating boils—that is, allowing as much or more for the subject's resistance as for active interference It must not be forgotten, moreover, that in certain areas, notably about the face, furuncles are potentially fatal. Finally, the action of x-rays in aborting boils in their early stages should be emphasized.

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Franklin I. Ball, M. D. (6253 Hollywood Boulevard, Los Angeles). — As Doctors Anderson and Ayres have indicated, the pustular dermatoses do indeed demand our attention, more from the therapeutic point of view, because of their frequent refractoriness, than from the diagnostic side.

Impetigo contagiosa is perhaps the greatest of our concern, because of its widespread occurrence and its consequent economic loss of working-time in adults, and loss of school days among children. Although the time-honored ammoniated mercury still holds its high position in our treatment of impetigo, the new occlusive dressing, with elastoplastic tape, merits serious consideration as a means of shortening the duration and the contagious nature of this infection.

We agree with Doctors Ayres and Anderson in recommending the use of Peck's oxychlorquinon ointment in the treatment of sycosis vulgaris, and wish to further encourage its use, as we have had more success with it than with any other locally applied therapy. X-rays are to be held in high regard, also, in the treatment of sycosis, and their use along with the oxychlorquinon ointment often makes for the best combination and result. We have also used the above ointment in the treatment of chronic infectious eczematoid dermatitis with gratifying results, and recommend its use here.

Of the vegetating pyodermias, we have seen a number and feel that they are of a superficial nature and are closely related to granuloma pyogenicum. As to their treatment we feel that when they do not respond to local applications or similar measures, they may be effectively treated by destructive endothermy.

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Sophie A. Lurie, M. D. (1025 Story Building, Los Angeles). — I presume that this thoughtful analysis of pyodermatoses will not reveal any discrepancies of opinion of its value among dermatologists.

In my estimation, the most important point to stress in this paper is the idea of distributing a dermatological conception to non-dermatologists, especially to the general practitioner.

While working on a huge clinical material, we have seen a number of ill complications in primary and secondary pyodermas, as a result of a false interpretation of a dermatological diagnosis and treatments.

Considering the methods of treatment which are applied by the authors, I am fully agreed with them.

I, personally, use with gratifying results, especially in bullous forms of pyodermas, applications, compresses and local baths of potassium permanganate solution 1:4000, or in exquisite cases I use local immunization, by means of compresses, of Besredka's antivirus (Abbott's).

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Doctor Ayres (Closing). — Doctor Anderson and I wish to thank the discussers for their remarks. Again touching on the treatment of the acute pyodermas, especially impetigo, furuncles, and pyogenic infections secondary to other conditions, we feel that, in our experience, the most useful single application is continuous wet dressings of Alibour water, an old French preparation of copper and zinc sulphate in camphor water.

One condition which I believe was not touched on was a rather uncommon granulomatous occurrence, usually caused by a combination of an anaerobic streptococcus and a staphylococcus. This type of lesion generally begins as an acute subcutaneous abscess which opens and spreads with an undermining border, a beefy-looking granulomatous base and a purulent discharge. This likewise is extremely rebellious to all forms of therapy. One patient whom we treated for over a year finally yielded to maggot therapy, while another, who is still under treatment, has resisted everything we have tried.

CANCER OF THE THYROID GLAND[*]

A REPORT OF TEN CASES

By Francis B. Settle, M.D.
Long Beach

Discussion *by William E. Costolow, M. D., Los Angeles; Robertson Ward, M. D., San Francisco.*

The occurrence of the following ten cases of cancer of the thyroid in a private surgical practice during a period of thirteen and one-half years in Southern California, where endemic goiter is not prevalent, seems to be of sufficient interest to warrant reporting.

REPORT OF CASES[†]

Case 1.—Mrs. E. A. B., age 64, born in Illinois, was first examined in March, 1923. There was a history of goiter for twenty years, with a definite and gradual enlargement in the past three years. Hyperthyroidism was evidenced by loss in weight, marked nervousness, increased appetite, and palpitation of the heart with some cardiac damage. Treatment was refused. This patient was seen again in July, 1924, complaining of difficulty in swallowing and breathing. There had been a recent rapid increase in size of the left lobe of the thyroid, with definite regional lymph node involvement. Diagnosis of cancer of the thyroid was made. At operation, July 6, 1924, the left lobe of the thyroid, consisting of one large, firm, well-encapsulated, substernal tumor, and two small hemorrhagic cysts, was removed. The pathological diagnosis was "adenocarcinoma of the thyroid." Postoperative x-ray therapy was given. In September, 1924, there was no evidence of recurrence and the regional nodes had disappeared. Her attending physician reported that she died January 17, 1927, of paralysis agitans and showed no evidence of recurrence of the thyroid malignancy.

* * *

Case 2.—Mrs. E. O., age 42, a graduate nurse, born in New York, was examined in February, 1924, because of a small, freely moveable tumor just anterior to the left sternomastoid muscle at the level of the thyroid cartilage. The thyroid gland was not palpable. A small fatty tumor had been removed from the neck in 1905. At operation March 10, 1924, a small cystic tumor mass one and one-half centimeters in diameter, entirely independent of the thyroid gland, was removed from the left side of the neck. Tissue diagnosis was "papillary adenocarcinoma of aberrant thyroid tissue." This patient was referred to a radiological clinic for further treatment. In November, 1925, a large benign uterine fibroid was removed by a New York surgeon. A year later this patient was again examined, and there was no apparent recurrence of the aberrant thyroid tumor and the thyroid gland was normal. On December 18, 1933, a definite recurrence of the aberrant thyroid tumor was noted. X-ray treatments were again given. By February 16, 1934, there was a rapid extension to the entire left side of the neck. The growth apparently became radio-resistive and x-ray therapy had no beneficial effect. A large elongated tumor could be felt in the left lobe of the thyroid gland. X-ray examination showed a marked destruction of the cervical vertebrae. Death occurred in April, 1934. Autopsy was not obtained.

* * *

Case 3.—Mrs. W. E. S., age 51, born in Nebraska, was examined in October, 1924, because of a rapidly recurring goiter of three weeks' duration. There was marked exhaustion, some loss in weight, nervousness, and palpitation. She had some difficulty in swallowing solid food. There was a history of goiter at puberty, and five years previously a tumor the size of a walnut had been removed

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[*] Read before the General Surgery Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

[†] Owing to lack of space, only five of the case reports are given. Others will appear in the reprints.

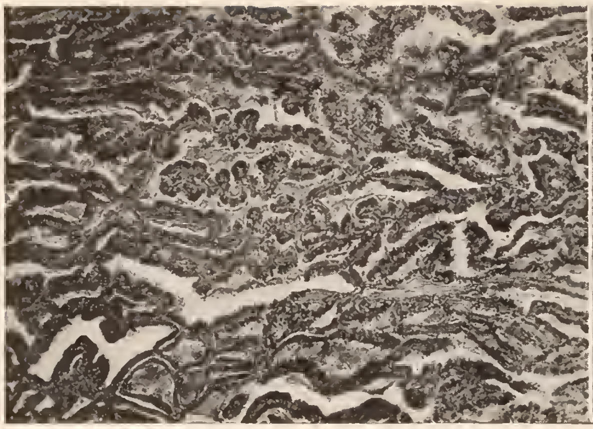

Fig. 1.—Papillary adenocarcinoma of aberrant thyroid tumor.

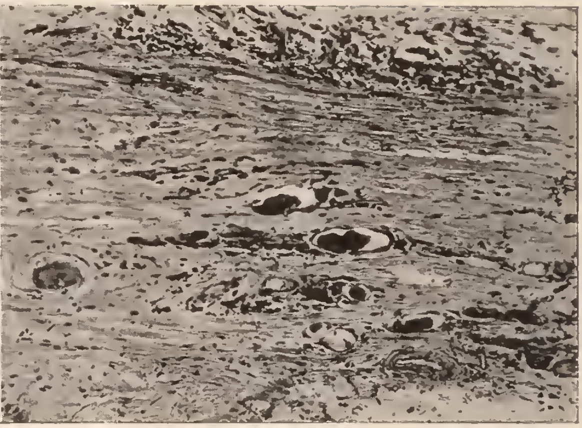

Fig. 2.—Tissue showing many thyroid cells from pathological fracture of right femur.

by a local surgeon. No tissue examination was made at that time. Examination revealed a hard, nodular, firmly fixed mass, about the size of a small lemon, just above the center of the former operative scar. This tumor seemed to extend into the mediastinum and to interfere with deglutition. There were numerous palpable posterior cervical glands. X-ray of the chest showed nothing abnormal. At operation, October 21, 1924, a firm, nodular tumor mass, 3½ to 4 centimeters in diameter, which was attached to the trachea and surrounding structures, was removed with considerable difficulty, leaving what appeared to be a part of the isthmus of the thyroid gland. Pathological diagnosis—"rapidly growing, mixed-cell carcinoma of the thyroid gland." This patient was given a considerable amount of x-ray treatment during the following three months. On January 11, 1935, this patient consented to a photograph, and appears to be free from any recurrence or metastasis.

* * *

Case 4.—Mr. A. M., age 58, born in Sweden, was first seen in June, 1925, with a history of goiter for about twenty-five years. In December, 1924, he had developed an acute hyperthyroidism, with a gastro-intestinal and mental crisis, and a metabolic rate of plus 104. Under careful medical supervision by a local physician this patient had made considerable improvement, and at the time of examination the basal metabolic rate was plus 15. The thyroid showed a diffuse enlargement on the right side, with a nodular enlargement on the left. On July 2, 1925, a test ligation on the right side was done. General reaction was favorable, but there was an apparent rapid increase in the size of the thyroid gland, the left lobe becoming markedly nodular; and on July 13 the left pole was ligated and tissue for examination recovered. Pathological diagnosis showed a rapidly growing carcinoma of the thyroid gland. This patient's hyperthyroidism became acute. He did not now respond to routine preoperative measures. The thyroid grew rapidly, and the patient died early in August of acute hyperthyroidism and pressure from the rapidly growing carcinoma of the thyroid. Before death the thyroid became firmly fixed, a number of regional lymph nodes were apparent and, although x-ray examination and x-ray treatment were refused, there was evidence of pulmonary and hepatic involvement. Autopsy was refused by the family.

* * *

Case 5.—Mrs. W. B., age 46, was first seen August 4, 1927, because of an unusually large tumor of the right lobe of the thyroid. There had been a preëxisting nodular goiter for three or four years. Two years previously a paroxysm of coughing had been caused by a foreign body in the larynx, and immediately following this there was a marked and noticeable enlargement of the thyroid gland. Examination revealed a large, nodular, freely movable thyroid involving both lobes and the isthmus. At operation, August 8, a subtotal thyroidectomy was done. The thyroid was found to be large, nodular, and contained one large hemorrhagic cyst. Convalescence was uneventful. Three weeks later this patient was readmitted to the hospital with a diagnosis of acute appendicitis. On exploration of the lower right abdomen, a large hemorrhagic ovarian cyst was found and removed, together with an acutely inflamed appendix. Careful pathological examination of the cystic tumor removed from the pelvis showed no evidence of malignancy. The thyroid tissue was again examined and no evidence of malignancy was found. In 1929 this patient sustained a fracture of the right femur. Union was delayed, and at operation, by another surgeon, tissue was recovered which on section proved to be thyroid tissue, indicating a probable primary neoplasm in the thyroid gland. We have been unable to follow this case because the patient soon left for the East and we have had no further contact with her.

CLINICAL MATERIAL STUDIED

During this period of thirteen and one-half years approximately seven hundred patients were observed, presenting some abnormality of the thyroid gland. The incidence of cancer to the number of patients examined was 1.43 per cent. This corresponds very closely to the incidence of cancer as observed in other sections of the country. It is, however, higher in localities where endemic goiter is prevalent. The age incidence corresponds very closely to malignancies in general; of the ten cases, one occurred in the fourth decade, two in the fifth, five in the sixth, and two in the seventh. The youngest patient was thirty-three years of age and the oldest sixty-seven years of age. There were six females and four males.

A history of preëxisting goiter was observed in nine of the patients, one patient having noted a goiter for only four months. The average duration was approximately fifteen years. Case 2, presenting a papillary adenocarcinoma of aberrant thyroid tissue, developed a tumor of the left lobe of the thyroid before death. Case 8 proved to be a secondary invasion of the thyroid following a primary malignancy of the left breast.

A clinical or presumptive diagnosis was made in seven of the cases, and the diagnosis depended upon a microscopical examination of the tissue in the remaining three. The appearance of a rapidly growing tumor of the thyroid gland, a rapid increase in the size of a preëxisting tumor, or a rapid and repeated recurrence, is always suggestive of malignant changes. Pain, difficulty in breathing and swallowing, huskiness of the voice

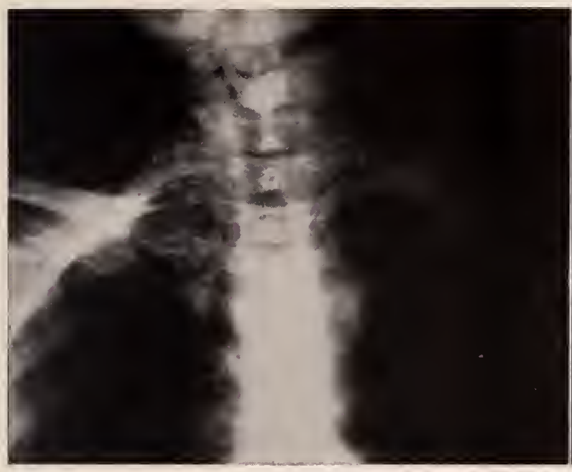

Fig. 3.—Large tumor left lobe of thyroid.

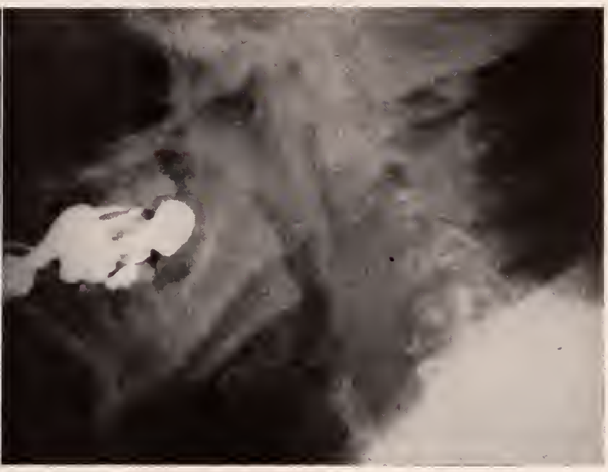

Fig. 4.—Destruction of cervical vertebrae.

and fixation of the tumor were common symptoms. There are no signs or symptoms by which early malignant changes can be recognized; for, commonly, it is only after the cancer has perforated the capsule of the gland, and has involved the surrounding structure, that a positive clinical diagnosis can be made.

THE MALIGNANCY ELEMENT

The function of the thyroid throws no light upon the differential diagnosis of malignancy; however, malignant changes were found incident to surgical treatment of toxic nodular goiter in a relatively high percentage of the cases reviewed in the literature. Five of the ten cases had definite toxic symptoms, one having suffered a gastrointestinal and mental crisis a few months before there was evidence of malignancy.

Primary lesions of the thyroid are for the most part epithelial in origin. The following types of malignancy were observed: there were two adenocarcinomas, one papillary adenocarcinoma of aberrant thyroid tissue, one mixed cell carcinoma, two carcinomas not classified, two probable malignant adenomas, one case resembling both carcinoma and sarcoma, and one secondary invasion of the thyroid from a primary cancer of the breast.

Many attempts have been made to classify malignant epithelial tumors occurring in the thyroid gland; however, most pathologists and surgeons agree that there are distinctive features which lend themselves to at least clinicopathological groupings. The different classifications vary for the most part as regards nomenclature rather than clinical features. Graham has called attention to the fact that the thyroid has certain peculiarities not common to other organs or tissue. In no other organ do malignant tumors of epithelial origin proceed so directly on a basis of a preëxisting benign tumor. In no other organ do malignant epithelial tumors (except chorionepithelioma) exhibit such a high incidence of metastasis through the blood stream. In no other organ does the histologic appearance of the cells and tissue, both of the primary carcinoma and its metastases, so closely resemble benign parent tissue in such a significant percentage of cases. He further believes that the determination of malignancy depends more upon the blood vessel invasion than on the morphological structure of the cells; however, a great many pathologists rely upon the usual criteria, that is, structural arrangement and cellular differentiation.

Cases 1 and 10 were diagnosed definitely as adenocarcinomata. This type usually arises from a preëxisting benign tumor, though it may occur in a nongoiterous gland, and includes mixed cell, round cell, spindle cell, and small or giant cell types, and in the more malignant lesions may resemble sarcoma. For this reason Cases 3, 4, 6, and 7 may be termed diffuse adenocarcinomas. Clinically, this type may spread by way of the blood stream, lymph spaces, or by direct extension.

PAPILLARY ADENOCARCINOMA

Papillary adenocarcinoma, commonly arising from a preëxisting benign tumor, is of low-grade malignancy and shows a marked predilection for invading lymph spaces and involving cervical lymph nodes. Distant metastases rarely occur. This type of malignancy resembles, clinically and pathologically, papillary adenocarcinoma of the ovary. Both are of low-grade malignancy and both are radiosensitive, a property which, for the most part, is not common to carcinomas of low grade situated elsewhere. Case 2, that of a papillary adenocarcinoma of aberrant thyroid tissue, illustrates this type of lesion.

Leech and Smith believe that aberrant thyroid tumors arise in cell masses which develop from the posterior portion of the pharyngeal complex, so-called fifth pouch, and fail to fuse with the gland proper. It has been suggested by Pemberton that these tumors may not be embryological defects, but may be deposits of malignant cells from a primary lesion occurring in the thyroid gland. The case herein presented, while showing no early involvement of the thyroid, did develop a large tumor of the left lobe of the thyroid before death. Diagnosis of these tumors is important because they are usually of a papilliferous type, are very radiosensitive and respond well to treatment.

MALIGNANT ADENOMA

Malignant adenoma or adenocarcinoma of fetal adenoma is said to arise from a malignant transformation of a benign fetal adenoma. Its morphology is not uniform, but varies within wide limits. It is for the most part of low-grade malignancy, and tends to metastasize early by way of the blood stream. This feature has been demonstrated at operation by the presence of sizeable masses of carcinomatous tissue in the veins of the thyroid gland. Invasion of the capsule does not occur until late, and often the malignancy is first discovered as a metastatic lesion. Case 5, that of a pathological fracture of the femur, had previously shown no evidence of malignancy in the thyroid gland which had been removed eighteen months before. It is, undoubtedly, this type of tumor that has been responsible for the frequent occurrence of the so-called metastatic benign adenoma of the thyroid. Simpson has proved rather conclusively that all cases of so-called metastatic benign adenomata of the thyroid, when completely examined, show definite primary lesions in the thyroid gland. Case 9 is also classed as a malignant adenoma. Clinically, this patient presented a rapid recurrence of the original tumor with marked involvement of the cervical lymph nodes which disappeared after x-ray therapy. Microscopically the original tissue resembled fetal adenoma. It is generally believed that benign adenomatous goiter does not respond so readily to irradiation therapy.

The thyroid gland may be involved secondarily as shown by Case 8, that of a rapidly invaded lesion resembling mammary tissue. This patient had had a preëxisting primary adenocarcinoma of the left breast.

METASTASIS

Metastasis occurred in each of the above ten cases. Regional lymph nodes alone occurred in four, mediastinum and lungs were involved in four, and in only one case was the bony skeleton involved. Dinsmore and Hickens, in a study of 124 cases of cancer of the thyroid with metastasis, found the incidence as follows: cervical lymph nodes 94, lungs 36, bones 18, brain 5, axillary lymph nodes 3, liver 2, soft tissue 2, and intra-abdominal 1, showing a marked preponderance of metastasis in the regional lymph nodes. Pemberton found cervical lymph nodes involved in 69 per cent of cases observed, lung metastasis in 24 per cent, and bones in 26 per cent. Eisen, Clute and Warren, and Pemberton have reported cases of metastasis into the heart.

TREATMENT

The treatment of the ten cases consisted of surgery, and x-ray in four cases, surgery alone in two cases, and no treatment in three. In one case a decompression operation was attempted too late to be of benefit.

It is significant to note that all authors agree that 90 per cent or more of malignant changes of the thyroid occur upon preëxisting benign tumors. Coller found clinical and pathological evidence of preëxisting adenomatous goiter in 98.8 per cent of ninety cases. Pemberton, Poole, Clute, Toland, and others, have suggested the advisability of removing all tumors of the thyroid occurring in the second and third decades of life as a preventive measure. Coller and Baker consider endemic goiter as a definite, precancerous lesion, and because of difficulties in diagnosis of early cancer and the slight chance of cure when a clinical diagnosis can be made, believe that all adenomatous goiters should be removed when diagnosed after the age of twenty-five.

In a study of approximately two thousand cases reviewed in the literature, 41 per cent were diagnosed clinically, and less than one-half of these cases responded to any type of treatment. The fact that 50 per cent or more were recognized by pathological examination alone suggests the necessity of careful microscopical examination of all goiterous tissue removed; for it is this type of case that affords uniformly good results if proper treatment is instituted. Palliative measures, such as decompression operations followed by irradiation, have prolonged life in a considerable number of cases in the apparently hopeless individuals.

Metastasis, either local or remote, does not necessarily preclude treatment. This is particularly true of the papilliferous type of tumor. Many cases have been reported in which a combination of surgery and irradiation have brought about an arrest and an apparent cure.

In general the type of treatment for cancer of the thyroid should be based upon the stage of advancement at the time of recognition. In a recent report of the committee on thyroid tumors, it has been suggested that these patients be placed in three distinct groups and treated accordingly. First, those in whom the diagnosis is made before operation; second, those in whom the diagnosis is made at operation; third, those in whom diagnosis is made by pathological examination. Group one, who are without demonstrable distant metastases, especially to the bones, should have as complete an electrosurgical removal of the tumor as is possible without damage to the surrounding structures. This should be preceded and followed by deep x-ray or radium therapy. In the cases in which the technical difficulties of removal of the tumor seem too great, the procedure may be reversed or x-ray therapy alone may be resorted to. Group two, in whom malignancy is recognized first at the operating table, usually have malignant adenoma with penetration of the capsule of the tumor. A total lobectomy is indicated in these cases, with the removal of as much surrounding portions or tissue of the other lobe as is necessary to eradicate the growth. A course of intensive x-ray therapy should follow the operation, beginning before the patient is discharged from the hospital. In group three, in which the diagnosis depends solely upon the microscopic examination of the tissue, the malignant growth is usually entirely within the capsule of the adenoma. In the large majority of these cases the primary operation is curative and no further treatment is indicated. If, however, pathological examination shows that the tumor has penetrated the capsule of the adenoma, a second operation should be done immediately, with removal of the entire lobe from which the malignant adenoma arose. Postoperative irradiation therapy is advisable.

RESULTS

Of the cases treated surgically and followed with irradiation therapy, one patient is living and well after ten years; one died after ten years, of recurrence and rapid metastasis; one died at the end of two and one-half years from intercurrent illness, with no evidence of recurrence or metastasis; one is alive and well at approximately two years after treatment, with no evidence of recurrence. One patient died two months later of rapid local recurrence and metastasis of the lungs and pleura, and one died immediately following decompression operation. Of the cases not treated two are known to have died within a short time after recognition, and the third case has not been followed.

IN CONCLUSION

No conclusions can be drawn from so small a number of cases; however, it can be said without contradiction that all tumors of the thyroid gland should be considered potentially malignant until proved otherwise.

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DISCUSSION

William E. Costolow, M. D. (1407 South Hope Street, Los Angeles).—To discuss the rôle of irradiation in the treatment of carcinoma of the thyroid, it is necessary to consider the various types of thyroid malignancy, both from the clinical and histologic standpoints. For certain clinical varieties, there are corresponding histologic classes which give a clue as to the probable method of invasion of the malignancy and the prognosis.

It has been shown in most of the large series of cases reported that the majority of carcinomas of the thyroid are in the lower grades of malignancy. Case 2 in Doctor Settle's group illustrates one of the low-grade types, which constitutes a large group of the thyroid malignancies—the papillary adenocarcinoma. This case, which we treated for Doctor Settle, illustrates the clinical course very well in this type of tumor—a radiosensitive, slowly growing, slowly metastasizing tumor, ending after ten years in spinal metastasis. These growths are mostly grades 1 and 2 of Broder's classification; but they are, nevertheless, radiosensitive, and probably partially due to the fact that the cells of the thyroid gland appear to be naturally more radiosensitive than those in some other glandular organs. In Pemberton's series of 137 patients living more than five years, 58 per cent were of this histologic type. Preoperative irradiation is of great value in this group, often rendering extensive inoperable growths operable. Radium implantation has also been used successfully in the papillary adenocarcinomas, partial surgical resection and implantation of the remainder of the growth being done. The radium implantation is possible in this papillary type, which metastasizes through the lymphatics, chiefly, but would be a contraindicated procedure, for instance, in an adenocarcinoma in a fetal adenoma, where metastasis occurs very early in the blood-vessel walls and throughout the blood stream. Radiation alone has produced complete five- and ten-year arrests in the papillary type of growth.

The adenocarcinoma in the fetal adenoma is quite radiosensitive. This growth, however, invades the blood stream early, and produces a high percentage of distant metastasis in the bones. These distant metastases in bone frequently show complete regression following irradiation.

The high-grade malignancies of the thyroid are, fortunately, the smallest group. The diffuse, high grade, fulminating growths, with rapid onset and metastasis, have been described under various classifications as small, round, spindle and giant cell carcinomas. This group is hopeless from either a surgical or radiotherapeutic standpoint, and invariably goes on to a fatal termination. Apparently this wildly growing growth is entirely radioresistant.

In planning the proper treatment of carcinoma of the thyroid it is most important to classify the case, by pathologic examination as to grade and type of malignancy, and by clinical grouping; because it is only by a consideration of these two factors that proper future treatment can be planned, and a clue as to the final prognosis be determined. Irradiation has been found to have a definite rôle in the treatment of carcinoma of the thyroid, both alone and in combination with surgery.

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Robertson Ward, M. D. (384 Post Street, San Francisco).—I am in complete agreement with the only conclusion which Doctor Settle has felt justified in drawing from his small series of cases, namely, that all tumors of the thyroid should be considered potentially malignant, until proved otherwise. To prove such benignancy is often most difficult, as some of his cases demonstrate. It is well known that pathologic examination is proverbially unreliable in thyroid malignancy, especially from the point of view of prognosis. Cases 5 and 9 in Doctor Settle's series are excellent examples of this difficulty. In neither of these instances could malignancy be revealed by pathologic examination, yet one patient had metastases to the bones within two years of operation and the other had local recurrence within three months, was relieved by x-ray therapy and now has recurrent masses high in the neck less than two years after operation.

Other interesting features are brought out by this study. From a similar study of sixty patients operated upon at the University of California Hospital, upon whom I have a complete follow-up, we have found that a five-year period of freedom from recurrence does not constitute a cure. Case 2 of Doctor Settle's series bears this out, inasmuch as there was a recurrence of a papillary-cyst-adeno-carcinoma nine years after an apparent cure by surgery and radiation. Upon its second appearance this tumor was absolutely resistant to radiation, and the patient died within four months. What biologic change is responsible for this state of affairs? It would be interesting to have a biopsy of the recurrent tumor to compare with the original material. It is only from careful studies such as Doctor Settle's, and equally careful follow-ups, that these questions are going to be answered.

I am particularly interested in Case 3 of this series. This patient is living and well without apparent recurrence ten years after operation. The pathologic picture was one of mixed cell carcinoma which, in my experience, has been universally fatal and completely resistant to radiation. This is another example of the inconsistency of thyroid malignancy. Case 7 illustrates the extreme difficulty in distinguishing between some cases of chronic thyroiditis and malignancy. We had, in our series, an almost exact parallel in a patient who died following a sternal decompression. In our case also the pathologic diagnosis was far from convincing as to the actual presence of malignancy. In Case 6 the epidermoid carcinoma showed a consistent lack of response to therapy and was of somewhat doubtful thyroid origin, while in Case 8 the invasion of the thyroid was definitely secondary.

In addition to the inconsistency of thyroid malignancy what other conclusions can be drawn from this study? First, 90 per cent of these neoplasms arose from an already pathologic thyroid, thus suggesting the precancerous lesion. Secondly, an average duration of preëxisting goiter for fifteen years before the probable onset of malignancy shows conclusively that there is no factor of safety in a long duration of goiter without apparent change, but rather that the danger of malignant degeneration increases with the years. Thirdly, 70 per cent of the patients showed a rapid or definite period of growth very suggestive of malignancy, especially in the six cases in which goiter had been present for many years; and, finally, all four patients in whom the diagnosis was made before operation are dead.

We are grateful to Doctor Settle for placing material at our disposal which points so definite a moral. If pathologic examination of specimens removed at operation is not entirely dependable for diagnosis of malignancy, how much less reliable is a clinical examination in settling this point. Now we add the knowledge that, in the series under discussion, all patients who waited for a clinical diagnosis are dead as a result of the disease. It seems evident that our duty to the patient who consults us regarding a nodular goiter is to explain the possibility of a malignant degeneration and advise surgical removal which carries an almost nonexistent mortality in experienced hands. We should, at least, insist upon a semi-annual check-up and give instructions to the patient to report for immediate examination at the first sign of change in the gland. There is no justification for the advice to forget the goiter on the supposition that it is now, and will remain harmless.

AMPUTATION OF THE THIGH*

A NEW AMPUTATION IN THE DISTAL PORTION OF THE LOWER THIRD OF THE THIGH

By C. Latimer Callander, M.D.
San Francisco

Discussion *by Hugh Jones, M. D., Los Angeles; E. W. Cleary, M. D., San Francisco.*

This report of an amputation through the distal extremity of the femur has a sufficient number of novel features to justify its description as a new operation.

ESSENTIAL DETAILS OF THE OPERATION

The essential details of the operation, in summary, are as follows. The anterior flap includes the soft tissues of the upper part of the leg, as far as the level of the tibial tuberosity, while the posterior flap is a little longer and extends well down on the gastrocnemius muscle. The popliteal vessels and nerves are ligated through an amuscular and an avascular cleavage plane on the mesial aspect of the low thigh. All of the hamstring muscles are severed at their tendinous insertions on the tibia, and the femur is sectioned in the condylar flare, a centimeter or less proximal to the adductor tubercle. The patella is dissected from the anterior flap from the joint side, leaving the rectus femoris tendon in the floor of the patellar fossa to act as an end-bearing buffer for the femur. No primary coapting sutures are used throughout the operation, save four to six skin-clips or sutures, which hold the flaps roughly in position. As the edges of the flaps unite, the posterior flap retracts gradually, but very extensively, until the femur occupies the patellar fossa snugly, and the suture line is located well up behind the stump-end.

The advantages which this operation offers over other lower-third femur amputations, including the Gritti-Stokes operation, and the simplicity of the procedure, warrant a detailed description of the operative technique and an analysis of the results thus far obtained.

DESCRIPTION OF OPERATION

This description records the stages of this amputation in the lower left femur. The patient is placed in the dorsal decubitus position, the knee of the diseased extremity is flexed slightly, and the leg is elevated a little above the horizontal on one or two sand bags. No tourniquet is applied. The surgeon stands on the side opposite the affected extremity and faces the medial aspect of the thigh and knee to be operated upon. He maintains this position throughout the operation, because the essential steps are directed through a medial approach to the popliteal space. The operative work on the lateral part of the low thigh and knee are accomplished readily by rotating the knee medially.

The skin incisions, outlining the slightly unequal anterior and posterior flaps, are at the same level as the incisions which sever all the deeper soft parts. The incision on the medial aspect of the thigh begins at a point three finger-breadths proximal to the most prominent part of the medial femoral condyle, and runs horizontally distally in the palpable groove between the vastus medialis and the sartorius muscles. With the knee in partial flexion, this groove can be defined readily. After deepening the incision to the enveloping or deep fascia of the thigh, the adductor tubercle of the medial femoral condyle, and the tendon of the adductor magnus muscle, which inserts on it, can be palpated. The skin incision continues distally over the medial epicondyle, sweeps forward and crosses the anterior surface of the tibia at the anterior tibial tuberosity, the point of insertion of the quadriceps extensor tendon.

The thigh then is rotated medially (*i. e.*, toward the surgeon). The skin incision on the lateral aspect of the leg begins at a point three finger-breadths proximal to the lateral femoral condyle in the palpable groove between the tendon of the tensor fasciae latae (iliotibial tract) and the biceps femoris muscles. The incision must be made very close to the tensor fasciae latae tendon in order to avoid the muscular fibers of the biceps. Continuing distally over the lateral epicondyle, the incision extends forward to meet the medial incision at the anterior tibial tuberosity, thus outlining the anterior flap of the amputation.

Corresponding incisions from each femoral epicondyle are carried obliquely, posteriorly, and inferiorly until they meet on the calf of the leg, at a point a little inferior to the level of the anterior tibial tuberosity. This is the posterior flap incision, and it is deepened to the fascia on the gastrocnemius muscle. Thus are outlined two long amputation flaps, the posterior a little longer than the anterior. Each flap partakes not only of the soft parts of the lower thigh, but of a considerable portion of the soft tissue of the leg.

Attention again is directed to the medial aspect of the thigh and knee. The horizontal portion of the medial incision, common to both flaps (*i. e.*, that portion lying between the vastus medialis and the sartorius muscles) is deepened through the deep fascia of the thigh. Division of this powerful fascial layer, which is the only strong struc-

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* From the surgical service of the University of California Division of the San Francisco Hospital, Division of the Department of Public Health, Dr. J. C. Geiger, Health Officer.

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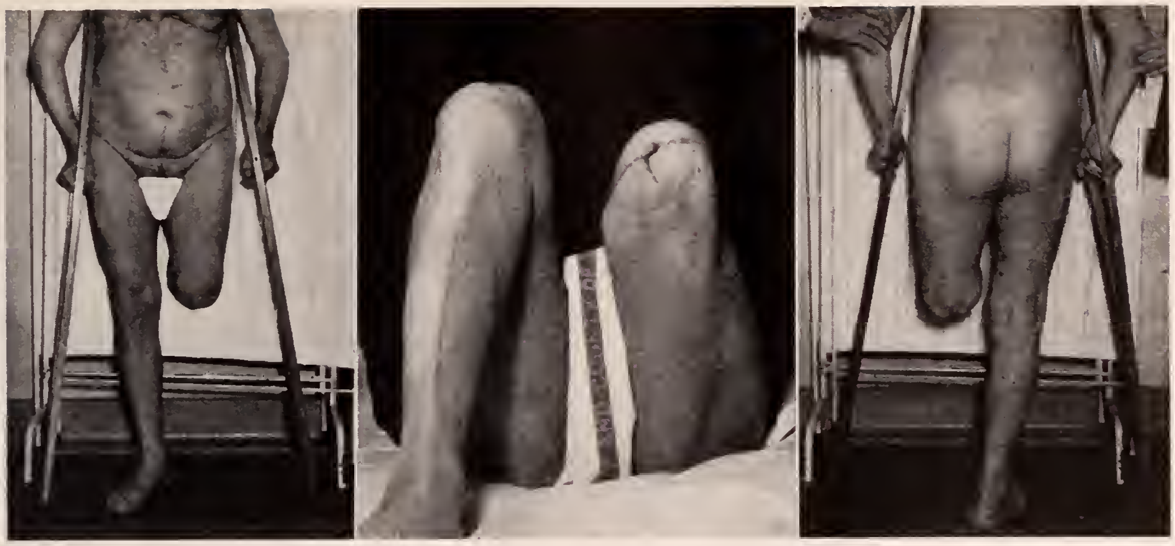

Fig. 1.—Anterior, posterior, and close-up views of the amputation stump. Note the extreme length placement of the suture line.

ture in the medial wall of the popliteal fossa at this level, affords ingress to the popliteal space. The left forefinger, now inserted shallowly into the popliteal space, frees the medial hamstring tendons to their tibial insertions by blunt dissection. At this juncture these tendons are divided in the order named—sartorius, gracilis, semimembranosus, and semitendinosus. During this dissection no fleshy portion of any of the medial hamstring muscles nor any part of the vastus medialis muscle need be exposed, much less severed. The severed hamstring tendons retract at once into the aponeurotic and areolar tissue of the posterior flap, and are not dealt with again. Further exposure is gained by severing the tendon of the adductor magnus muscle at its attachment to the adductor tubercle. Free access to the vasculoneural contents of the popliteal space thus is afforded. Moderate flexion of the knee relaxes the popliteal vessels and nerves, and favors their manipulation. With a finger now inserted more deeply into the popliteal space and kept close to the posterior surface of the femur, the popliteal artery and vein are withdrawn easily to a level flush with, or even outside of, the skin incision. Here they are clamped, ligated, and divided as near the superior apex of the popliteal space as is convenient. The tibial (internal popliteal) and common peroneal nerves then are drawn readily into the wound as one trunk and are anesthetized, ligated, and divided. Each of the components of the nerve bundle is injected with absolute alcohol to prevent neuroma formation, and the stump is allowed to retract into the proximal recess of the popliteal space.

The partly flexed knee now is rotated toward the operator, and the lateral longitudinal skin incision is deepened through the deep fascia of the thigh. The incision is carried through the deep fascia as far as the insertion of the biceps muscle on the head of the fibula, where the biceps tendon then is severed. At this stage of the operation the popliteal space may be opened widely from

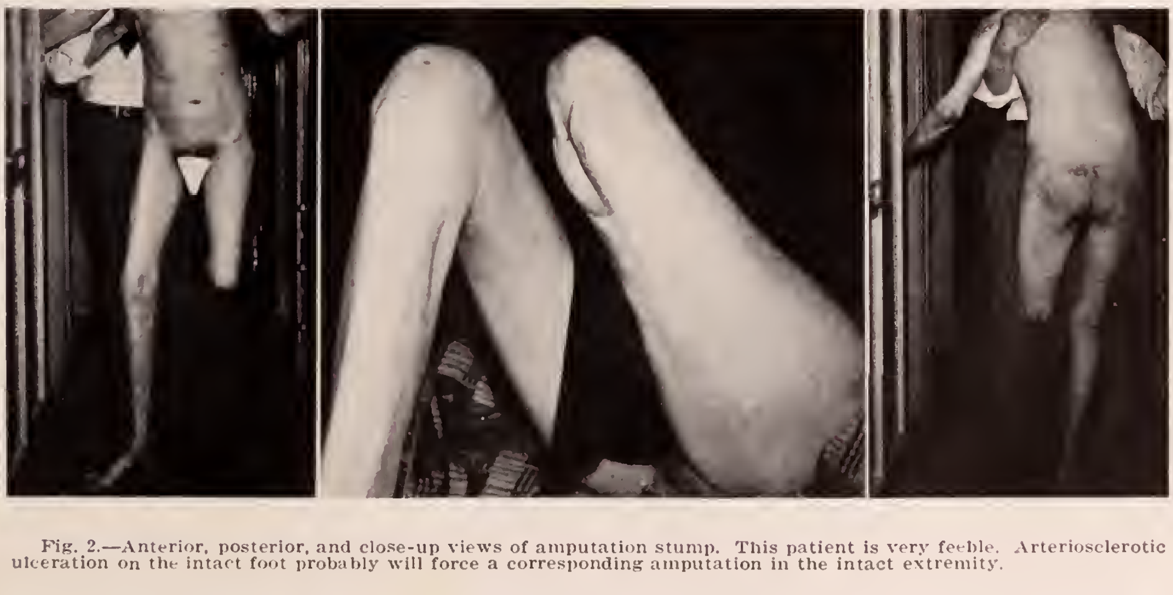

Fig. 2.—Anterior, posterior, and close-up views of amputation stump. This patient is very feeble. Arteriosclerotic ulceration on the intact foot probably will force a corresponding amputation in the intact extremity.

side to side since the essential structures have been divided. Deepening of the incision marking the posterior flap down to the gastrocnemius aponeurosis, and clearing from it the areolo-adipose débris, free the posterior flap. It is advantageous to leave the fibro-areolar tissue of the popliteal space in contact with the femur as far down as the level of the adductor tubercle in order that there be as little dead space as possible between the posterior flap and the femur.

The knee then is extended, and the incision marking the distal portion of the anterior flap is deepened through the capsule of the knee-joint down to the femoral condyles and the tibia, thereby severing the quadriceps tendon at its insertion into the tibial tuberosity. The anterior flap, containing the patella, is dissected upward, off the infrapatellar fat pad and drawn upward on the thigh until the superior synovial recesses of the subquadriceps space are seen. The patella is dissected from its sesamoid position in the quadriceps tendon, care being taken to preserve the longitudinally disposed tendon of the rectus femoris muscle which runs over it. Preservation of this tendon adds materially to the end-bearing capacity of the stump after the cut end of the femur is fitted into the socket from which the patella has been removed. The synovia on the anterior flap and over the femur proximal to the condyles is not excised. The femur now is sawed through its concellous portion about a centimeter proximal to the adductor tubercle. At this level the shaft of the femur has expanded to a size which approximately corresponds to the patellar socket in the quadriceps tendon. The cut end of the femur is rounded with a rasp until no sharp surfaces and no fringes of periosteum remain.

The two large flaps are now inspected for small bleeding points. These can be ascertained best by sluicing the surfaces of both flaps with large quantities of warm salt solution. This flushing has the additional advantage of washing away small soft tissue and bone débris. Many small bleeding points may require ligation after this procedure. Inspection of the body of the posterior flap shows no muscle fibers, but only areolo-adipose tissue and the cut ends of the hamstring tendons. These tendons already are retracted into their aponeurotic beds and are scarcely visible. The flaps now are allowed to fall together loosely. The only coapting suturing during the operation is in the form of not more than four to six skin-clips, placed at such intervals as to keep the flaps in fair apposition. When the skin edges are approximated, the aponeurotic edges also lie in contact; mere apposition is sufficient to produce firm union. None of the tendons or aponeuroses of the anterior flap are sutured to corresponding structures in the posterior flap. In this way no structure is under any tension, and the trauma and consequent pressure necroses resulting from suture of these deeper structures, therefore, cannot occur. The flaps appear exceedingly long, and immediately after they are fashioned may extend one inch or more beyond the bone end. To the surgeon accustomed to the routine type of lower third femur amputation, the flaps will appear excessively redundant and clumsy, and he will fear that a bulbous stump-end and large dead spaces will result. He will wonder, too, when he notes how wobbly the femur lies between the flaps, how the femur end will gain contact with the patellar socket and fuse there. During the early days of convalescence the reason for leaving these flaps under no tension appears. At the end of the second or third postoperative day, the hamstring muscles, severed only at their distal attachment, contract to the degree that the skin suture line lies posteriorly placed at about the level of the stump-end, and the femur is felt in the patellar fossa.

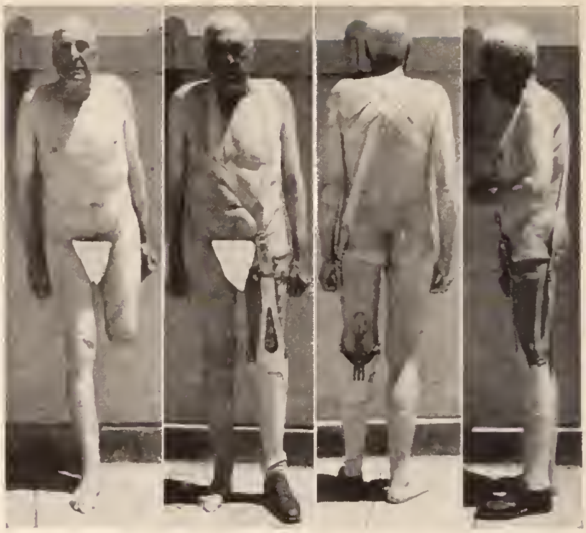

Fig. 3.—Views of an elderly patient wearing an end-bearing prosthesis.

POSTOPERATIVE CONVALESCENCE

After the operation the stump is wrapped snugly in a gauze roll and the patient is returned to bed. He is able to sit upright in bed in the evening of his operative day and can be placed in a wheelchair during the next day or two. Daily dressings are required because an abundant serosanguinous oozing between the skin edges may take place for several days, this in spite of the most meticulous hemostasis. The drainage gradually lessens. The absence of primary suturing other than that necessary for flap approximation minimizes the pocketing of fluid accumulation and allows all secretions to escape through the wide intervals between the skin-clips. Usually the major oozing stops in from one to three days. When this drainage has ceased, the skin edges between the clips or sutures placed at the time of operation are approximated carefully by additional skin-clips. These clips are applied readily without anesthesia. This procedure, which has been adopted only in our last cases, has resulted in complete union of the flap edges within a week. The time of convalescence has been decreased remarkably in this fashion. As convalescence progresses, the posterior flap retracts gradually until the suture line, now posterior in position, is well proximal to the bone end, occasionally a distance of one or more inches. When it is recalled that the suture line at the end of the operation is an inch or more distal to the bone end, it becomes apparent how extensive is the power of the intact hamstring muscles to retract the posterior flap. In a short time the femur is lodged securely in the patellar fossa, thus assuring great stability to the soft parts of the stump. There is excellent end-bearing because of the presence of the rectus femoris tendon, the elements of the prepatellar bursa, and of tough skin over the bone end. The patient is able to extend his stump powerfully, a requisite in any thigh amputation.

In my series healing has taken place in four weeks on the average. In our last three patients in whom the skin edges between the primary suture points were approximated secondarily by additional clips, healing was complete at the end of a week.

CONCLUSIONS

Mortality from thigh amputation will be decreased if the technique as outlined be followed meticulously. The factors which lower the mortality rate are: lessened shock from adequate control of blood supply and from section of muscles only in their tendinous insertions; diminished incidence of pneumonia from a lessened period of recumbency; decreased tendency to anaerobic or aerobic infection, because there are no structures under tension, this being the result of long flaps and no suturing; the serum produced in the wound has ready exit; and the lessened incidence of reamputation which in itself carries a considerable mortality. Reamputation has not been necessary in any of our cases, and should not be because of the adequacy of long anterior and posterior flaps.

Thus far fourteen amputations have been performed according to this method. The majority of these patients were over seventy years of age. One has died, a mortality of about 7 per cent. This man was eighty-four years of age, and died eleven days after his operation from a coincidental pneumonia. His amputation wound was fairly clean and had united partially. His amputation was the second in our series. At the time his operation was performed, we did not know that we could get our patients up practically immediately. It is possible that his pneumonia could have been averted by getting him into a wheelchair on his second postoperative day, the procedure we have adopted in all later cases. Thirteen out of these fourteen cases were amputated for arteriosclerotic or diabetic gangrene. One patient was amputated for intractable compound fracture near the knee.

The mortality statistics of thigh amputation vary widely. Much depends on the condition of the patients. The best of the larger series show a death rate of 15 per cent, while the series in the city hospitals and relief homes show much higher figures. Prior to the development of our operation, the mortality of thigh amputations on our service in the San Francisco Hospital exceeded 50 per cent.

450 Sutter Street.

DISCUSSION

Hugh Jones, M. D. (201 Medical Office Building, Los Angeles).—Doctor Callander's operation promises to be a valuable advance in the surgical care of gangrenous lower extremities. I am of the opinion that an extended series of cases will bear out the soundness of the anatomical reasons for this type of operation, first in regard to the circulation of flaps and also in the severing of muscles at their insertions rather than through fleshy bellies. There is a distinct advantage in gaining a longer stump, as well as an end-bearing stump. The avoidance of open paths for spread of anaerobic infection is another point worthy of emphasis.

This makes us realize that our knowledge of surgical anatomy is certainly incomplete, and that we should ever be critical in accepting without question our heritage of the classical operations.

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E. W. Cleary, M. D. (490 Post Street ,San Francisco). Doctor Callander is to be congratulated upon developing this method of lower thigh amputation. An end-bearing stump is a very great advantage. For this reason the Gritti-Stokes amputation has been effective. The Gritti-Stokes technique is, however, sufficiently elaborate to carry with it relatively large limitations as to selection of suitable cases and, notwithstanding careful selection, a too high percentage of imperfect healings. Doctor Callander's operation commends itself because of simplicity and consequent wider range of applicability. His technique is about as near atraumatic as an amputation of the thigh could possibly be. Muscles are not cut, a large weight-bearing surface is preserved, the uncertainty contingent upon bony union of the retained patella has been cleverly avoided, and the use of ligatures and sutures has been brought to an irreducible minimum.

This amputation is, I believe, a significant improvement over all previously devised low-thigh amputations.

PATHOLOGIC FINDINGS AT THE PARS CARDIA OF THE STOMACH*

By Jacob Abowitz, M.D.
Los Angeles

Discussion *by Louie Felger, M. D., Los Angeles; H. H. Lissner, M. D., Los Angeles.*

THIS presentation aims to call attention to pathologic conditions in the pars cardia of the stomach and the relatively frequent changes occurring in the organs and structures adjacent to it. These changes, as observed fluoroscopically or radiographically, often give the first clue to pathologic conditions at the pars cardia, and may be of great aid in establishing a diagnosis.

CHANGES IN ADJACENT STRUCTURES

The Diaphragm.—Changes in position and excursion of the diaphragm often indicate pathology either above or below the diaphragm.

Cardiac End of the Esophagus.—The cardiac end of the esophagus, during deglutition, tapers down at the introitus of the stomach, and opens and closes intermittently, although a true sphincter does not exist there. When pathology is present this sphincteric action may be lost, and the cardiac end of the esophagus may be either gaping or contracted, depending on the nature of the lesion. The conical shape may become distorted and its lumen eccentrically displaced. These changes may be observed fluoroscopically with the aid of a barium mixture. Occasionally, when pathology is present, a speck of barium may be present at the cardiac end long after the barium meal has been ingested.

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* From the department of roentgenology, Cedars of Lebanon Hospital, Los Angeles.

Read before the Radiology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

The Gas Bubble (Magenblase).—There is almost always present a small amount of gas in the stomach. When the patient is in the upright position, the gas bubble rises to the pars cardia. In this position it is pear-shaped, point down. When the distal end of the gas bubble, on a fasting stomach or six hours after a barium meal, is replaced by a fluid level more than half an inch in width, it is an indication of gastric hypersecretion, or hyperacidity. This hypersecretion may be due to either reflex or local irritation.

A large gas bubble often indicates erophagia. Distortion of the shape or outline of the gas bubble may be produced by a new growth, extrinsic or intrinsic, of the pars cardia. A large gas bubble, by raising the left diaphragm, may produce cardiac symptoms. In diaphragmatic hernia the gas bubble is usually absent at the pars cardia.

Occasionally the pars cardia, especially its lesser curvature, is displaced laterally by an enlarged left lobe of the liver, while a distended splenic flexure displaces the greater curvature mesially.

PATHOLOGIC CONDITIONS FOUND IN THE PARS CARDIA

Carcinoma of the Pars Cardia.—In carcinoma of the pars cardia we invariably find the left diaphragm elevated, and its excursions decreased or absent. The gas bubble is distorted and encroached upon by a tumor mass, either on its left or right side, depending on whether the carcinoma is situated on the lesser or greater curvature. When the carcinoma invades the anterior or posterior wall, the tumor may be visualized through the gas bubble. As a rule, in carcinoma of the stomach there is hyposecretion, and no fluid level is present at the tip of the gas bubble. Normally, peristalsis is not well marked at the pars cardia; when carcinoma is present, peristalsis is entirely absent. Normally, the ingested barium mixture runs down the lesser curvature in a narrow stream; with carcinoma of the pars cardia this stream is deviated to the left, or divided into several irregular branches. A speck of barium often remains for a considerable time at the cardiac end of the esophagus. The filling defect in the stomach is best observed in the horizontal posture, when the pars cardia is completely filled with barium mixture. Carcinoma of the pars cardia of the stomach often invades the cardiac end of the esophagus, and vice versa when there is carcinoma of the cardiac end of the esophagus. A note of warning may here be sounded that the splenic flexure, when situated behind the pars cardia and when filled with intestinal contents, or distended with gas, produces a transitory filling defect in the barium-filled stomach simulating the filling defect of a carcinoma. The same is true when a large spleen is present. A reëxamination at a later date usually clears the question.

Diaphragmatic Hernia.—I shall not elaborate on this subject which became so popular of late through the lay press. I shall mention only a few points which may be of interest to the profession. In our routine gastro-intestinal examination of 1,100 patients, we have found diaphragmatic hernia in two per cent of the cases. Most of the herniae found are of the esophageal type; that is, the hernia enters the thoracic cavity through the esophageal hiatus in the diaphragm. A history of either a recent or an old injury was elicited from practically all of our patients, although the patients did not attribute their gastro-intestinal symptoms to that injury. Occasionally the isthmus connecting the hernia with the body of the stomach becomes ulcerated and bleeds, probably produced by the constriction of a small hernial opening. Three of our patients were so anemic that transfusions were indicated. In one of them a penetrating gastric ulcer was found at the isthmus of the hernia. Presuming that the small opening in the diaphragm produced the ulcer, an operation was performed to widen it, with subsequent marked improvement in the patient's condition. All the cases were discovered during fluoroscopic examination.

To demonstrate the hernia on the film we found a modified knee-chest position most satisfactory. Manual pressure on the barium-filled stomach on deep inspiration best demonstrates the condition. Occasionally, the horizontal position shows it better than the vertical. Three of our cases were recognized incidentally by observing the gas bubble behind the heart shadow. Two cases were discovered on genito-urinary films; the third, fluoroscopically, while administering a barium enema. I believe the visualization of the gas bubble behind the heart shadow is a valuable and unmistakable roentgenologic sign of a diaphragmatic hernia. To my knowledge, this observation has never been described before.

A Pouch at the Pars Cardia.—Not infrequently a pouch is present at the pars cardia on the lesser curvature below the esophageal hiatus. It is best visualized fluoroscopically in the right-oblique vertical position, when the stomach is only partly filled with the barium mixture. Then two fluid levels are seen: one in the pouch and one in the lower end of the stomach. This condition is variously described in medical literature as a "cascade stomach,'" a "shelving portion" of the stomach, or "cup and spill" deformity. The clinical significance of it is that it occasionally becomes inflamed or ulcerated; then the symptoms are the same as those of a gastric ulcer. The subjective symptoms are often a feeling of heaviness in the epigastric region after meals, probably due to the stasis of food in the pouch. One patient complains that she is awakened from her sleep by a drumming sound in the epigastric region. This sound is synchronous with the pulse and is produced by the heart apex beating against a gas-distended pouch.

Erophagia. — Erophagia is not an uncommon condition. It is often observed fluoroscopically. Occasionally it produces pressure on the heart from below. Recently one of our patients, a highly neurotic woman, suffered from periodic attacks of vomiting. Fluoroscopically, we noticed that she subconsciously swallowed so much air that there was very little room left in the stomach for food, and eructation of the gas produced vomiting.

IN CONCLUSION

In conclusion, may I say that, although the pars cardia is considered the silent area of the stomach, and only about five per cent of pathology occurs there as compared with the rest of the stomach, nevertheless this presentation indicates that the extra effort of a thorough and careful examination of this region is often well compensated.

Cedars of Lebanon Hospital.

DISCUSSION

Louie Felger, M. D. (1930 Wilshire Boulevard, Los Angeles).—Lesions of the pars cardia of the stomach are responsible for many obscure and atypical symptoms referable to the lower part of the thorax and the upper part of the abdomen. The pars cardia is a relatively silent area, and there are no symptoms which are diagnostic of pathology in this location.

In diaphragmatic hernia the symptoms are due to impairment of respiration and circulation, or to disturbed function of the herniated abdominal organs. The increase in the recognition of diaphragmatic hernia is entirely due to marked advances in roentgenologic study. A survey of these cases shows that the diagnosis is rarely suspected by the clinician, these cases being diagnosed as gall-bladder disease, peptic ulcer, carcinoma of the stomach, intestinal obstruction, and heart disease. Three cases were hospitalized with hemoglobins of 15, 17, and 19 per cent, respectively, and regarded as hopeless carcinomas of the stomach. However, x-rays revealed diaphragmatic herniae with large ulcers in the herniated portion of the stomach.

It has been recommended that diaphragmatic herniae be looked for when the findings at surgery do not seem sufficient for intra-abdominal complaints. Many operations upon the gall-bladder, stomach, and appendix have been performed because of unrecognized diaphragmatic herniae.

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H. H. Lissner, M. D. (1908 Wilshire Boulevard, Los Angeles).—The numerous diagnostic points brought out by Doctor Abowitz in his article open up a new field of thought not only from the standpoint of x-ray diagnosis, but also because they merit serious consideration from the clinician as an aid in clearing up certain problems which, under the older methods, have remained obscure.

It has been the custom of the clinician to refer his patients to the roentgenologist for certain studies and to accept the latter's report as *prima facie* evidence, for or against a given condition, without checking over the pictures together or correlating the x-ray with the clinical findings. Usually if the x-ray does not agree with the clinical diagnosis, it is the latter which is discarded and the former is accepted irrespective of the clinical evidence in its favor. The fixing of the mind upon a definite organ to be studied, and the centering of thought upon a certain part of that organ, and not considering it as a whole, have caused many errors to creep in between the x-ray findings and the clinical diagnosis of a disease. This error is best exemplified in the study of the stomach. If the internist asks for a gastro-intestinal series, the pylorus of the stomach is the part usually studied and we are shown a series of photographs taken at various time intervals representing the function of the pylorus. If these photographs are reported as being negative, the internist begins to look about for another peg upon which to hang his clinical diagnosis. However, by looking at the organ as a whole we have been able to develop a relationship between the roentgenological and the clinical aspect of the patient's discomfort, which is just as essential to the patient's welfare as is good teamwork between the surgeon and his trained assistant. The studies of the cardiac end of the esophagus, and of the pars cardia, under this scheme of coöperation have resulted in picking up several cases of carcinoma of the stomach in this region which had been overlooked in a number of previous x-ray studies. The diagnostic points outlined by the author are invaluable aids to a better reading of the x-ray studies of the stomach, and should bring to the fore the fact that stomach symptoms are caused by lesions in this organ in its so-called "silent area," even though the esophagus or the pylorus are not primarily involved.

Another very important point brought out by Doctor Abowitz is the presence of an air bubble or shadow behind the heart in diaphragmatic hernia. If the hernia is large, the usual distortion of the magen blase is seen to the left of the heart shadow; but in some instances where the hernia is small the shadow generally will cause a lighting up of the usual cardiac silhouette. Here again I wish to emphasize that the fixing of the mind focus upon the heart itself and the elimination of the rest of the chest content from the mental picture.

Cases of diaphragmatic hernia have been suspected upon attempting to explain this shadow, and upon further barium studies have been proved to be hernia. The cardiac symptoms produced by this lesion vary with the patient and the size of the hernia. Dyspnea, after a big meal, is an outstanding symptom, and is dependent upon the size of the hernia and the amount of cardiac displacement. Precordial pain is not a prominent symptom.

The pouch of the pars cardia is a very interesting condition and one that at times is the cause of great concern to the patient, because of the drumming sound which frequently accompanies it. As might be suspected, the sound varies from that of a drumming character to a more musical or kettle-drum sound, or even at times has a bell tone. It can be controlled by changing the position of the patient from the left to the right side.

The diagnostic data brought out in Doctor Abowitz's paper will, I hope, stimulate a closer liaison between the roentgenologist and the clinician, and will open our eyes to the rest of the x-ray pictures, besides the study of the particular organ for which it was taken.

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Doctor Abowitz (Closing).—Since the presentation of the above paper, I have observed the following case:

In examining a chest film, I noticed a somewhat opaque spherical shadow in the region of the heart, measuring about three inches in diameter. Several diagnostic possibilities presented themselves: (1) aneurysm of the thoracic aorta; (2) a mediastinal new growth; (3) a mediastinal abscess; (4) diaphragmatic hernia; or (5) a dilated esophagus. The clinical signs and symptoms offered no help in diagnosis. The fluoroscopic examination in the left oblique vertical position showed the left border of the spherical shadow protruding beyond the left side of the heart, and not pulsating. The fluoroscopic observation after the administration of a barium mixture revealed a diaphragmatic hernia with the pars cardia of the stomach above the diaphragm. The walls of the herniated protrusion were thickened and adherent in the posterior mediastinum. The esophagus, which was normal in shape, stopped short just above the diaphragm.

TREATMENT OF EXOPHTHALMIC GOITER*

By H. Ross Magee, M.D.
Los Angeles

Discussion *by John C. Ruddock, M.D., Los Angeles; A. B. Cooke, M.D., Los Angeles.*

FOR the control of exophthalmic goiter we have two therapeutic weapons of proved value: (1) the administration of iodin, and (2) resection of the thyroid gland. Partial destruction of the thyroid gland by roentgen rays has also been found to be of some value, although its beneficial results often prove to be only temporary. J. H. Means and his associates [2,3] at the Massachusetts General Hospital have reported favorable results in a considerable number of cases in which patients were treated by roentgen rays.

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* Read before Santa Monica Branch of Los Angeles County Medical Society, Santa Monica, California, April 9, 1935.

The popularization, since 1922, of preoperative treatment with iodin has resulted in a reduction of the surgical mortality to less than one per cent. Physician and patient no longer regard thyroidectomy as a dangerous operation, to be undertaken only when conservative measures, such as roentgen treatments, have failed. The evaluation of any method of treating exophthalmic goiter is possible only if one is careful to keep in mind that the natural course of the disease, when untreated, is characterized by exacerbations and remissions, and there is a tendency for it to cease spontaneously after a course varying in length from a few months to more than twenty years.

ETIOLOGY

Although the primary cause of exophthalmic goiter is not known, the available evidence indicates an abnormal, intensive stimulation, from some unknown source, of the entire thyroid gland. This stimulation results in diffuse hypertrophy of the thyroid epithelium. In practically all cases, excessive quantities of thyroxin are produced and are delivered to the tissues. With this intensive stimulation of the thyroid gland, the normal supply of iodin may prove inadequate for its requirements, so that at least a part of the secretion produced and delivered to the tissues may be abnormal in quality, and possibly be an imperfect form of thyroxin. This hypothesis, developed by C. H. Mayo and H. S. Plummer, affords the most satisfactory explanation of the clinical phenomena of exophthalmic goiter, and of the effect of iodin in this disease.

CHARACTERISTIC FEATURES OF EXOPHTHALMIC GOITER

The chief and characteristic features of exophthalmic goiter, which distinguish it from adenomatous goiter with hyperthyroidism, are the peculiar nervousness and irritability suggestive of cerebral intoxication, the useless purposeful movements, the exophthalmos, stare, and other ocular signs, and the gastro-intestinal crises with vomiting and diarrhea. It is probable that all of these characteristic phenomena of exophthalmic goiter are attributable to an abnormal thyroid secretion, as they cannot be regarded as due to pure hyperthyroidism. The degree of intensity of these symptoms is not proportional to the degree of elevation of the basal metabolic rate. Progressive exophthalmos may occur when the basal metabolic rate is zero, or is as low as minus 20 per cent. A patient presenting marked evidence of cerebral intoxication, with a basal metabolic rate of plus 20 per cent, may be precipitated into a severe crisis by an infection or by an operation. On the contrary, a patient with a basal metabolic rate of plus 90 per cent may show little or no evidence of cerebral intoxication, and may undergo thyroidectomy with practically no risk of a postoperative crisis.

Although accurate statistics are not available, it has been observed that the characteristic features of exophthalmic goiter are more pronounced in the Mississippi Valley basin and Great Lakes region, where the iodin content of soil, water, and food is less than in the coastal regions. The gastro-intestinal crisis is seen much oftener in the Northwest than in New England. This and other observations led H. S. Plummer, in 1922, to administer compound solution of iodin (Lugol's solution) to a series of patients with exophthalmic goiter. The beneficial results were so striking that iodin is now used routinely in the treatment of the disease. As had been anticipated from theoretical considerations, the administration of iodin was found to relieve all the characteristic symptoms of exophthalmic goiter which differentiate it from adenomatous goiter with hyperthyroidism. Patients in crisis stopped vomiting within a few hours, often after the first dose of iodin. Exophthalmos was arrested. The characteristic psychic status was abolished, and the useless purposeful movements ceased. The degree of clinical improvement was found to depend on the relative predominance of symptoms referable to the abnormal thyroid agent. The beneficial results in cases in which patients had a high degree of cerebral intoxication or were in a gastro-intestinal crisis were the most striking. In this group there was usually a proportionately large drop in the basal metabolic rate. With patients who had exophthalmic goiter of long standing and a basal metabolic rate often of greater than plus 75 per cent, but who had little evidence of the characteristic cerebral intoxication of the disease, improvement on administration of iodin was much less marked. Often only a very slight drop, or no drop at all, in the basal metabolic rate occurred. It is probable that in this group of cases the thyroid gland had been accustomed, ever a period of years, to utilize small quantities of iodin and yet produce a relatively high proportion of normal thyroxin. Such cases may perhaps be said to be "iodin-fast," or resistant to iodin. The probable explanation is that the iodin supply of the thyroid gland had been sufficient for its needs, and an additional supply was not utilized.

Patients with exophthalmic goiter who have been given iodin for some time may later have an increase in the basal metabolic rate and some intensification of symptoms. This should be interpreted as an exacerbation consistent with the natural course of the disease and not as one due to the administration of iodin. Such an exacerbation is almost always more intense if the administration of iodin is discontinued.

PREOPERATIVE TREATMENT WITH IODIN

Preoperative treatment with iodin has now become standard in all surgical clinics, although the form of administration and the dosage still vary to some extent. As little as one minim of Lugol's solution daily may be sufficient in some cases to produce the maximal improvement possible. In most cases it seems advisable to give 10 minims of Lugol's solution three times daily, and in a few cases larger doses will produce more benefit. For patients in crisis it is necessary to give 50 to 100 minims of Lugol's solution daily for the first few days.

The maximal drop in the basal metabolic rate most often occurs about the seventh to the tenth day after the administration of iodin is begun. In some cases the maximal drop may occur about the end of the second week, and occasionally even later.

In a few cases the administration of iodin results in a complete remission, with control of all the symptoms and a return of the basal metabolic rate to normal. Discontinuance of iodin in such cases is usually followed by a return of the symptoms within two weeks. If administration of iodin is continued, the remission occasionally remains complete. After a variable period of time it may even be possible to discontinue the administration of iodin without recurrence of symptoms. This program entails a long period of observation in order to be certain of continuous and complete control of the disease, and in most cases it is not a practicable one. Moreover, after a period of weeks and months of complete control with iodin, an exacerbation may occur which is not fully controllable by iodin alone, and thyroidectomy may become necessary. The safest and most economical program is, therefore, to carry out partial thyroidectomy in these cases, even though the administration of iodin has resulted in complete remission.

PARTIAL THYROIDECTOMY

Partial thyroidectomy may safely be performed in milder cases after seven to ten days of preoperative treatment with iodin. In more severe cases it is best to delay operation for three or four weeks, or even longer, to allow the patient to recuperate. Especially is this necessary when there has been a marked loss of strength and weight or a recent acute infection. Most patients may be allowed to be ambulatory while they are being prepared for thyroidectomy. Patients who are extremely weak, those in crisis, and those who have a complicating acute infection, cardiac decompensation, or other visceral degenerative changes, must be kept in bed during the first part of the preoperative treatment. However, it is very important that they be up and about for at least a few days prior to operation in order to allow them to regain their strength. Patients who are too weak to walk about the room are not yet ready for operation.

CONGESTIVE HEART FAILURE

Patients with congestive heart failure will often rid themselves of as much as ten to twenty pounds (4.5 to 9 kilograms) of edema fluid on a simple program of rest in bed and Lugol's solution. For others it is necessary to use one of the intravenous diuretics, such as salyrgan. By restricting the intake of fluid to from 1,000 to 1,500 cubic centimeters daily, with oral administration of six grams of ammonium nitrate daily and one to two cubic centimeters of salyrgan intravenously every three or four days, patients with an extreme degree of anascara usually become fluid-free within two weeks. Digitalis in moderate doses is occasionally used to reëstablish cardiac compensation. However, patients with hyperthyroidism seem to be especially susceptible to the toxic effects of digitalis. The drug should be used more cautiously and in smaller doses than in cardiac decompensation due to other causes. It is also important to discontinue the administration of digitalis a few days prior to thyroidectomy. Auricular fibrillation often is replaced by a normal sinus rhythm as cardiac compensation is reëstablished. However, persistence of auricular fibrillation does not *per se* add a great deal to the risk of operation.

It is very important to have patients with exophthalmic goiter follow a diet high in calories. As much as 5,000 calories daily may be required to check the loss of weight due to the greatly increased total metabolism. Even in the presence of diabetes mellitus, it is necessary to give a diet high in calories with enough insulin to control the blood sugar.

THYROID RESECTION

Thyroid resection was at first usually limited to excision of the larger lobe, leaving the second lobe to be resected later if it enlarged subsequently. Standard thyroidectomy now consists of resection of both lateral lobes with removal of the isthmus of the gland. Preservation of the posterior part of each lobe, comprising a sixth to a half of the gland, insures sufficient secreting thyroid tissue to prevent postoperative myxedema. Persistence or recurrence of the symptoms of exophthalmic goiter is much less frequent since the introduction of this type of bilateral resection. Since, also, the introduction of preoperative treatment with iodin, patients come to operation in a much better condition to withstand thyroidectomy. The surgeon, therefore, feels able to do a more complete resection than would have been possible when even a slight prolongation of the operative procedure was likely to cause the death of the patient.

Prolonged inhalation anesthesia is very harmful to the patient with hyperthyroidism. Local anesthesia, using procain hydrochlorid, supplemented by nitrous oxid and oxygen, is the most satisfactory method. Sodium amytal or avertin anesthesia does not allow the surgeon to test the function of the vocal cords by having the patient speak or cough.

TECHNICAL ERRORS

The most frequent technical errors which the operator seeks to avoid are injury to the recurrent laryngeal nerve and postoperative hemorrhage. If hemostasis is difficult, this may often be achieved by ligation of one or both inferior thyroid arteries at a point proximal to their entrance to the gland. Occasionally, the wound must be packed and left open. Injury to the nerve is best avoided, according to Pemberton, by preserving the posterior, mesial portion of each lateral lobe and avoiding exposure of the lateral wall of the trachea. If the voice shows that the nerve has been injured, the immediate removal of a constricting suture will be followed by a return of normal function in six to ten weeks.

MULTIPLE STAGE OPERATIONS

Prior to the advent of preoperative treatment with iodin, the fear of a severe postoperative hyperthyroid crisis often led to the employment of the multiple stage operations. Ligation of one or more of the chief thyroid vessels was often done in the hope of reducing the vascularity of the gland, thus causing it partially to atrophy. After one or more ligations, the patient was often able to undergo subtotal thyroid resection with much less risk of postoperative crisis than if primary thyroidectomy had been done. Similarly, lobectomy—the resection of one lobe only, which involved but half the surgical trauma and half the chances of technical error as compared with resection of both lobes—was found to be followed by such a marked improvement in the condition of the patient that a second lobectomy could be done a few weeks later with much greater safety.

Since preoperative treatment with iodin, the need for multiple operations has greatly decreased. Ligation is seldom employed, as it rarely produces any more improvement in the patient's condition than could be produced by the administration of iodin. In the small group of cases in which the condition is of several years' duration, and the thyroid gland is large and hard and the basal metabolic rate is high, removal of one lobe at a time involves much less danger than removal of both lobes at once.

POSTOPERATIVE COMPLICATIONS

One of the most frequent postoperative complications is respiratory obstruction, due to injury of the recurrent nerve, tracheal pressure, or excessive tracheal mucus. Respiratory obstruction may lead to pulmonary edema, anoxemia, cyanosis, and bronchial pneumonia. Oxygen is of very great value for these complications, and its use should be begun as early as possible. It is advisable to maintain a concentration of 50 per cent oxygen in the tent or oxygen chamber. Acute hyperthyroid reactions are very uncommon since the advent of preoperative treatment with iodin. It is essential to continue the administration of iodin during the postoperative period. Small doses of iodin should also be given, at least periodically, for at least one year after thyroidectomy. This program will in many cases prevent recurrence of exophthalmic goiter.

IN CONCLUSION

While the majority of patients are completely and permanently relieved by iodin followed by partial thyroidectomy, a definite though small number will have recurrence of the syndrome later. Although this is more common when sufficient thyroid tissue has not been removed, recurrences may result even when a very small amount of thyroid tissue is preserved. It seems probable that such recurrences take place in a group of cases in which thyroid stimulation has been more intense and prolonged than in the average case. Recurrences are usually mild and controllable by iodin alone. If the thyroid remnant subsequently enlarges, the symptoms are less likely to be controlled by iodin alone, and further resection of the gland must be carried out.

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REFERENCES

1. Mayo, C. H., and Plummer, H. S.: The Thyroid Gland. St. Louis: C. V. Mosby Company, 1925, 83 pp.

2. Means, J. H., and Holmes, G. W.: Further Observations on the Roentgen-Ray Treatment of Toxic Goiter, Arch. Int. Med. 31:303-341 (March), 1923.

3. Means, J. H., and Richardson, E. P.: Oxford Monographs on Diagnosis and Treatment. New York: Oxford University Press, Vol. 4, 1929, 366 pp.

4. Pemberton, J. deJ.: Obstructive Dyspnea, Following Surgery of the Thyroid Gland, and Its Prevention. Surg. Clin. N. Amer., 4:451-457 (April), 1924.

DISCUSSION

John C. Ruddock, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Magee's paper presents very clearly and forcibly the problem of the hyperthyroid patient. Doctor Magee brings out the complex picture of the disturbed physiology, namely, the utilization of iodin, the production of thyroxin and the storing up of colloid material. The proper functioning of the gland is intimately associated with all three of these factors, as each one bears a direct relationship with the other. The physiology is disturbed from some cause and, naturally, all manifestations which present themselves are the result of a disturbed function of the gland.

Because of knowledge gained, experimentally and clinically, of the function and physiology of the thyroid gland, we are able to restore a dysfunction to normal function, by evaluating the disturbing elements causing the changes in metabolism. This is done by increasing utilizable iodin, thereby increasing colloid and decreasing circulating thyroxin; or, vice versa, increasing circulating thyroxin, which results in decreasing colloid and utilizable iodin. There are many gradations, however, between these two simple extremes, and the problem may be very complex.

The influence of the thyroid is far-reaching, and its effect on the human organism is such that stabilization is essential, if any radical procedure is contemplated.

Experience has shown clearly that medical management of the hyperthyroid state is not sufficient to maintain a normal status, and again surgery is not the answer. However, surgery offers more at the present time than any other type of therapy. The weak link in the surgical treatment is that the surgeon must make a judgment at the time of operation as to the amount of tissue to be removed, in order that the physiologic function of the gland will be returned to normal. It is indeed a lucky man who removes *exactly the right amount of tissue* in every case.

I would take issue with Doctor Magee as regards digitalis therapy in cases of hyperthyroidism. Digitalis should not be used except for cardiac decompensation, and then should be given exactly and in the same amount as would be given any other decompensated heart. Tachycardia or auricular fibrillation without decompensation are not indications for digitalis. Digitalis in moderate dosage will give disappointing results in restoring compensation, and should be used in dosage sufficient to get full physiologic action.

Doctor Magee has brought out the problem of therapy of hyperthyroidism. Shall it be medical? Shall it be surgical? Shall it be by roentgen ray? Shall it be by various combinations of the three? Or shall we admit that there is yet much knowledge to be gained, and much experimental research to be done in order to solve the problem of therapy for the hyperthyroid state?

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A. B. Cooke, M. D. (2007 Wilshire Boulevard, Los Angeles).—The very full discussion Doctor Magee gives to the question of iodin in his paper on the treatment of exophthalmic goiter is perhaps its outstanding feature. While certain of the views expressed are controversial, in the main he presents the accepted teaching on the subject.

I believe it is wise always when mentioning iodin as a treatment of exophthalmic goiter to use the qualifying term "preparatory," lest the idea be conveyed that it is a curative remedy for the malady. Much harm is being done by some physicians in the indiscriminate and prolonged use of the agent—direct and immediate harm occasionally, but more often in its long-continued use for the purpose and with the promise of cure. I very rarely see a case of thyroid disease of any kind in which this remedy has not been used, and, in the sense referred to, *abused*.

The importance of exophthalmos as a diagnostic symptom is sometimes overemphasized. If present, it is practically pathognomonic when associated with other symptoms.

But we must remember that it occurs in only some 50 or 60 per cent of cases, and that it may occur entirely independent of thyroid disease.

Too much reliance should not be placed on the value of basal metabolism readings. Like other laboratory findings they are to be interpreted as corroborative and confirmatory aids in reaching a correct diagnosis, and then only when taken under proper conditions with an apparatus known to be accurate and by a technician known to be fully competent.

The statement is made that since the advent of the iodin preparatory treatment the surgical mortality has been reduced to less than one per cent. This statement might easily prove misleading. Such results are obtained when the surgery is done by experienced operators. But the mortality rate is much higher in the hands of the inexperienced. Here 10 per cent would probably be a more correct figure.

Doctor Magee's address is a good presentation of the management of exophthalmic goiter, embodying the best that is known on the subject at the present time.

ATHLETIC INJURIES*

By Packard Thurber, M.D.
Los Angeles

Discussion *by Harold H. Hitchcock, M.D., Oakland; George O. Berg, M.D., Los Angeles; E. F. Roth, M.D., Palo Alto.*

GENERALLY speaking, athletic injuries differ little from injuries caused by other means. However, there are certain conditions that are at least common, if not peculiar, to athletic endeavor, and therefore the prevention and treatment of these injuries cause us to digress from the usual methods of treatment in certain instances.

STAFF ORGANIZATION

Not so many years ago, most injuries, at least on the field of competition, were given first aid by "trainers" or "rubbers," but I believe that at present practically all of the universities maintain a well-organized medical department, with a regularly licensed physician in charge. At the University of Southern California the Athletic Medical Department adjoins the Varsity dressing rooms, and is comprised of minor surgery, x-ray, hydrotherapy, massage, and examination rooms. The personnel consists of the medical director, two assistant surgeons, dentists, masseurs, and historian.

All of the above are on active service during the athletic year and, in addition, we have a consulting staff of representative men in their respective specialties.

EXAMINATIONS OF CANDIDATES

At the beginning of the athletic season a complete physical examination is given all candidates, including complete dental x-rays and mouth charts. Helmets, shoulder-pads, hip-pads, shoes, and other equipment are checked to forestall avoidable injuries. Team members are then advised that, while the University does not assume responsibility for injuries resulting from athletic competition, they offer the services of their medical department; but if the athlete so desires he has the privilege of securing other medical attention at his own expense. In any event, an injured athlete must be examined and passed as fit for further competition by the University medical staff. All minors are instructed to obtain operative permits from their parents or guardian, and these are filed for use in case of emergency.

The director of athletics sends a program of events to the medical director's office each Monday morning and arrangements are then made for one of the staff doctors to be in attendance at all contests wherein the University is host. Consequently, injured athletes are extended immediate treatment by a registered, licensed physician.

FITNESS TO ENGAGE IN SPORTS

In our organization the medical director determines the fitness of an athlete to continue competition, and we are, therefore, confronted at times with rather serious responsibility because many of the athletes are minors, and during the most athletic contests we are restricted to two or three minutes to diagnose, treat and decide whether or not the patient shall be withdrawn from the contest. We are aided, however, in this respect by the fact that we are familiar with the physical condition, reactions, temperament and peculiarities of the individuals, since they are under our direct observation practically every day during each athletic season. Furthermore, at times we use a few fundamental rapid tests on the field, such as the Rhomberg, eye-reflexes, et cetera, in concussion cases, and determine their mental equilibrium by asking questions pertinent to the particular athletic endeavor in which they are engaged at the time of injury.

It is somewhat superfluous to remind you that the members of these athletic teams are all anxious to reach the top and remain there; and while we dislike to disqualify them, nevertheless we recommend substitution where an injury creates a special hazard. We believe it fair to assume that the athletes and their parents are aware of the possibility of injury under ordinary circumstances, but where a condition materially increases the hazard we acquaint the parent with our findings and abide by their decision. In rare cases, of course, where the issue is clear the medical director recommends absolute retirement.

A few words concerning another phase of the subject, wherein it differs from private practice, may be said in connection with the importance of keeping the athletes in active competition. You all know that track, basketball, baseball, football, and the other athletic seasons are of relatively short duration, and that, in many cases, with special protective apparatus and the consent of the parents, we permit the player to continue; whereas in private practice we would probably restrict a patient's activity. Necessarily, these special splints that we use must be of light weight, small proportion, and conform to certain rules and regulations, designed to protect the other players from injury.

TYPES OF INJURIES

Obviously, our most common injuries are acute sprains, such as the acromioclavicular joint (shoulder joint); subacute sprains, following repeated strains, such as attachments of pronator teres, flexor and extensor groups at the elbow (golf and tennis elbow); strains of the anterior tibial group attachments (shin splints); severe, deep muscle contusion with hemorrhage (Charley horse); contusion with avulsion muscle attachments pelvic rim (hip point); abrasions (floor burns); bursitis, tenosynovitis, dislocated finger joints, knee cartilage and ligament injuries, and, early in the season, blebs, intertrigo (jock strap itch), dermatomycosis (athlete's foot), etc. The less common and more severe types are the concussions (brain and chest), fractures, major dislocations (shoulder, elbow), etc.

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* Read before the Industrial Medicine and Surgery Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

TREATMENT

With regard to treatment, while there are many different types and methods, we feel that fundamentally our most valuable assets are:

1. *Anatomical Relocation of Injured Tissues.*—In this connection I more particularly refer to sprains, torn ligaments, and strains of muscular attachment about joints, because in these conditions the essential pathology consists of a small area of effusion at the point of trauma, and the pain is due to tension or pressure on this effusion. Whether the repair of damage is by first intention or becomes a subacute or chronic condition, depends upon the treatment instituted. If the effusion is absorbed and the torn ends of tissues approximated and maintained in their normal position for a sufficient period of time, prompt and complete repair will ensue. "Sufficient time" is ten days to two weeks, we believe, except in the very severe cases. Conversely, if the damaged area is subjected to repeated assault by muscular effort or other movement, stretching and tearing of the newly formed repair tissue take place and create a subacute or chronic process by producing a small plexus of fibrous tissue which, in turn, impedes circulation and, therefore, the complete absorption of the effusion.

2. *Heat and Massage.*—These are used according to accepted methods.

3. *Supportive Treatment.*—Under this heading are grouped compression bandages, elastic bandages, taping over adhesive, and sponge rubber pads, etc., and these assume an important rôle in treatment. The problem of "athlete's foot" and allied skin conditions have been adequately controlled for the past several years by water-cooled quartz lamps and thorough removal of moisture between the toes, following the shower.

A word about knee cartilages: My observations, while operating on these joints, lead me to the conclusion that forced manipulation of a locked knee is seldom justified. In those instances where a knee will not unlock within two or three days with relaxation, our operative findings usually indicate the futility of forced manipulation, in so far as any permanent relief is concerned.

CONCLUSIONS

Considering the opportunity for physical damage, we believe that the standard protective equipment, including special splints and apparatus, is satisfactory; but, of course, all injuries cannot be prevented.

Good physical condition and consummate effort tend to forestall injury. For example, many injuries in football practice occur in so-called dummy scrimmage, where maximum physical effort is not exerted.

It is of prime importance to allow acute injuries "sufficient time" to heal by primary intention.

Manipulation of injured members should be avoided until a definite diagnosis has been made.

Athletes with known physical ailments, creating a serious extra hazard to injury, should be disqualified.

The National Collegiate Athletic Association, through its proper committees, has done much in the way of rule changes to eliminate injuries.

417 South Hill Street.

DISCUSSION

Harold H. Hitchcock, M. D. (1624 Franklin Street, Oakland).—The method of handling injuries among athletes does not vary much in our American colleges, since the gate receipts from football has put the average college into big business.

The diagnosis and outline for treatment, as well as the decision as to when the man shall return to competition, has been taken away from the coach and trainer and put into the hands of trained medical men with a corps of consulting specialists. It is true that coach and trainer still attempt to exert their influence by calling men yellow at times who claim to have been injured, or try to bring undue influence on the athletic physician to permit an excellent player to return to competition before he should.

It is our feeling that the cheers of the multitudes in the bleechers soon die out; that too many athletes are better endowed with physique than brains, and if this physique is ruined because of permitting them to compete while injured in college, that an irreparable damage has been done, both to the student and to the sport in which he competes.

In dealing with athletic injuries in our American colleges, most of the patients are between eighteen and twenty-four years of age and are excellent physical specimens. There are certain fairly common congenital and developmental conditions which predispose some men to back injuries such as prespondylolisthesis and congenital anomalies of the low back and juvenile kyphosis with Schnorl's changes.

We feel that all injuries should have good x-rays when there is any chance of bone or joint injury. This practice has shown us many fractured carpal scaphoids that would have been missed and called sprained wrists, many fractured laminae in the spine, many congenital anomalies of the spine, which are a factor in making their backs more vulnerable.

Injuries to the lateral ligaments in the knee that are severe enough to permit lateral instability are treated by immediate open operation and repair. Knees that fill quickly with fluid after injury are aspirated, as they usually contain blood. We do not aspirate if we feel the fluid is a simple effusion in the knee. Exercises for the quadriceps muscles are begun at once. The patient is not permitted to return to competition until this muscle has returned to normal. Injuries to the semilunar cartilage and fat pads are common. If a cartilage is injured it is removed, otherwise the knee does not return to normal. The only place for manipulation in the treatment of knee-cartilage injuries is for temporary relief.

Muscle injuries in track athletes sometimes appear trivial, but result in grave consequences if they are permitted to run. I have seen spiral fractures of the tibia and fibula occur from the calf muscle contracting. Michigan's two-mile runner had had a sore calf for two weeks before competing against California this year. In that race the calf contracted, he heard and felt his leg bones break, and then fell and pushed the tibia through the skin to compound the fracture.

I have twice seen the humerus broken in throwing a ball by a player with a sore arm.

We feel that all broken necks should be prevented from further athletic competition.

In football we find more injuries occur in a poorly conditioned, a fatigued or dazed man, or in a team that is demoralized and receiving a severe beating. These individuals are slowing up, not coördinating, and are apt to be injured.

If college athletics are to continue, especially football, those intrusted with the care of injured athletes must have the courage to keep any injured man from competition until he has completely recovered and is not suffering additional risk by virtue of his recent injury.

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George O. Berg, M. D. (6253 Hollywood Boulevard, Los Angeles).—In athletics we have preventive medicine as well as curative. We use all of the known principles in both fields, and we augment the first with suitable protections for all injuries.

We deal with men in a remarkable state of health. They recover rapidly, and most of them are fired with the ambition to compete. Many will hide injuries, and a small minority will magnify injuries. We are seeing a rapid evolution and change in the methods of diagnosis and care of injuries. The old-time "punch drunk" type of trainer is being replaced by men of training and sympathetic outlook.

In general, I agree with Doctor Thurber's comments on types and treatment of injury. Let me say that the common injury, known as charleyhorse, was studied scientifically by me at the University of Wisconsin ten years ago. By pathologic material from dogs I proved that the various stages such an injury goes through are:

1. Hemorrhage and serous swelling between muscle bundles, occurring chiefly close to the bone.
2. Subperiosteal hemorrhage.
3. Excavation of necrotic muscle tissue by polymorphonuclear leukocytes.
4. The formation of fibrin.
5. Change of this to the fibroblast.
6. Metamorphosis of the fibroblast to connective tissue cells.
7. The development of the connective tissue cell as a bridge.
8. The burrowing through an area of scar tissue by muscle-buds springing from uninjured muscle tissue with burrowing buds loaded with juvenile types of cellular nuclei in a manner similar to the function of the osteoblast.
9. Union of these buds and restoration of tissue, as well as function, provided we have not insulted nature by reinjury.

We use all standard methods of physiotherapy in treatment.

At this time I desire to warn this group against acceptance of unsupported statements by unscrupulous manufacturers that radiotherapy apparatus will not burn. Such a statement is untrue. We have had the misfortune of having a severe burn occur while treatment was being given under the direction of the demonstrator employed by one of these companies.

I have been successful in getting several cases of dislocated semilunar cartilages to heal with a reliable knee-joint resulting. This has been possible through immediate reduction of the dislocation under anesthesia and immediate application of a plaster cast and bed rest for two weeks following by appropriate physiotherapy.

*

E. F. Roth, M.D. (300 Homer Avenue, Palo Alto).—I find the set-up for the care of athletic injuries at the University of Southern California is much the same, with individual variations, as the set-up at Stanford University.

The public and the profession have been under the impression that athletic injuries as a whole have been handled in a haphazard manner, principally by trainers and rubbers. This article, therefore, gives some general idea of the facts in connection with athletic injuries as handled by most of the large universities on the Coast.

The treatments used coincide, as a rule, with those of any orthopedic surgeon, with the advantage of seeing the injuries immediately after their occurrence. Thus we are able to apply immediate control measures to hemorrhage and secondary trauma to the damaged tissues; and this, with the youth and enthusiasm of the patients, helps us to complete many rapid recoveries.

MORTALITY LESSONS IN A SERIES OF 4,029 GYNECOLOGIC OPERATIONS[*][†]

By Harold K. Marshall, M.D.
and
Robert H. Thompson, M.D.
Glendale

Discussion *by L. A. Emge, M. D., San Francisco.*

The value of mortality and morbidity studies is incontrovertible. The periodic audit establishes standards for comparison. Its advantages are many. For the patient, mortalities are reduced. For the surgeon, his illusions are disproved, his surgical conscience aroused and he is stimulated to greater efforts and to the correction of faults. Regular, honest auditing of our surgical results is a basic cornerstone upon which progress rests.

CLINICAL MATERIAL REVIEW: PERIOD FROM JULY 1, 1928 TO JULY 1, 1934, AT LOS ANGELES COUNTY HOSPITAL

In this paper is presented a review of the deaths on the gynecological service of the Los Angeles County Hospital, covering a period of six years, from July 1, 1928 to July 1, 1934. An analytical study of each case has been made with reference to preoperative status, type of operative procedure and postoperative course.

During the six-year period there were 7,812 patients admitted on the gynecological service, with a total of 183 deaths, an incidence of 2.3 per cent. A total of 3,783 patients were discharged without operation, leaving 4,029 (51.6 per cent) that underwent some type of primary operative procedure. There were 121 deaths in the operated group—a gross operative mortality of 3.0 per cent. Three thousand five hundred and five, or 87 per cent, of these were laparotomies; approximately 17 per cent of which were so-called "double cases," in which abdominal and vaginal plastic work were combined. A total of 524, or 13 per cent, were vaginal cases only. There were 2,352 hysterectomies done, including the three types, subtotal, total, and vaginal, which means that the uterus was removed in 58.4 per cent of all operations performed on the service. The vast majority of these were the subtotal type. There were 83 patients who died following hysterectomy, an incidence of 3.5 per cent.

Anesthesia records were not analyzed for the first three years of the period. During these years ether was used in the majority of cases, but the use of spinal anesthesia was steadily increasing. The last three years, spinal anesthesia was used in almost twice as many cases as was ether.

ARRANGEMENT OF THE SIX COUNTY HOSPITAL SERVICES IN GYNECOLOGY

There are six separate services in the gynecologic department, each with its senior and junior attending staff members. During the six-year period, fifteen attending staff members performed

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[*] Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

[†] A statistical study of patients at the Los Angeles County Hospital (period 1928 to 1934).

From the Department of Obstetrics and Gynecology, University of Southern California School of Medicine.

TABLE 1.—*General Statistics—Six-Year Period*

Year	Total Admissions	Total Deaths	Total Operations	Operation Deaths	Hysterectomies	Hysterectomy Deaths	Laporatomies	Vaginal only
1928-29	856	18	516	15	214	11	438	78
1929-30	1,123	36	624	17	351	11	553	71
1930-31	1,325	38	710	25	399	22	617	93
1931-32	1,622	33	782	21	477	12	682	100
1932-33	1,303	30	675	26	450	17	602	73
1933-34	1,583	28	722	17	461	10	613	109
Totals	7,812	183	4,029	121	2,352	83	3,505	524
Per cent	100	2.3	51.6	3.0	58.4	3.5	87.0	13.0

2,954 operations, and ten resident staff members operated a total of 1,075 cases, so that twenty-five operators are represented here.

All patients at this hospital are supposed to be charity patients. The vast majority of them are in poor physical condition on admission. More often than not the gynecological condition bringing them to the hospital is in an advanced stage. Anemias and low general resistance are the rule. All these factors combine to make the patient a below par operative risk.

MORTALITY CLASSIFICATION

For the purpose of analysis, we have divided the mortalities for the period into:

1. *Malignancies*: Twenty-one cases, including four carcinoma of the cervix; five carcinoma of the fundus; one sarcoma of fundus; and eleven carcinoma of ovaries, many with metastases. All except one had laparotomies.

2. *Emergencies*: Seven cases, including four pelvic abscesses; two acute intestinal obstructions; and one ruptured gall-bladder cyst.

3. *Electives*: Ninety-three cases, including sixty-three subtotal, six total, and three vaginal hystertomies; seventeen laparotomies other than hysterectomy; four vaginal plastic cases.

STUDY OF PREOPERATIVE STATUS CONFINED TO ELECTIVE GROUP

For obvious reasons, in our study of the preoperative status of the fatal cases we concerned ourselves only with the latter group, the so-called elective cases. In the malignancies and emergencies, we cannot always control the time or the type of operation, but in the elective group we are dealing with women who are having an operation on advice and not as an immediate necessity. The woman about to undergo an elective gynecologic operation has the right to be safeguarded in every way. As Norris[1] rightly points out, "no operation is so trivial that every step to safeguard the patient should not be employed, nor is any operation entirely free from the danger of a fatal termination. Major risks have to be taken, but every effort should be made to minimize them by preoperative study and care."

PREOPERATIVE DATA—ELECTIVE GROUP

Age.—Age did not appear to be much of a factor. The youngest was eighteen and the oldest seventy years. Sixty-two, or two-thirds of the cases, were between thirty and fifty years of age.

Weight.—There were eighty-one patients of average weight—100 to 150 pounds; five were under 100 pounds and seven over 175 pounds, five of these being over 200 pounds.

Preoperative Period in Hospital.—The average stay of patients in the hospital before operation was over a week. Only two were in the hospital under forty-eight hours prior to surgery. So I think we can say, with regard to preoperative stay in the hospital, that there was a very little so-called "railroading" of patients to surgery.

Blood Studies.— Five patients in the elective group had no blood count at all. An additional six had no hemoglobin nor red blood count determination, making a total of eleven cases operated without a hemoglobin or red blood count being made. Twenty-four patients were admitted with hemoglobin below 70 per cent; five below 30 per cent. In the series, twelve patients were given twenty blood transfusions before operation. Twelve patients went to surgery with hemoglobin below 70 per cent and eleven below 60 per cent, two of these below 40 per cent; and eleven additional cases underwent major elective surgery without any red blood count or hemoglobin studies. Obviously twenty-three patients, or 25 per cent, should not have been operated without further study. Ward[2] stresses the importance of the preoperative prophylactic transfusion, and emphasizes its value, not only in those patients with marked secondary anemia, but also in those borderline cases which show only a moderate loss—65 to 70 per cent hemoglobin and 3,000,000 to 3,500,000 red blood cells. He argues for the adoption of routine preoperative transfusions in patients with

TABLE 2.—*White Blood Count and Differential Before Operation*

7,000– 9,000	40	Polynuclears per cent:	
10,000–12,000	11	65 – 80 per cent......	51
12,000–15,000	7	Below 65 per cent......	14
15,000–19,000	6	Above 80 per cent ...	10
Above 20,000	2	Without Differential..	18
Below 7,000	22		
Without W. B. C. or Differential	5		

57 per cent had abnormal W. B. C., or was not done.
45 per cent had abnormal Differential, or was not done.

hemoglobin under 70 per cent. An elective blood transfusion is a simple procedure and can be done at the operator's own time; and its advantages to the patient about to undergo surgery are too well known to need further elaboration.

These were the final counts before operation. In fairness it must be stated that some of these high counts were on admission, the patient being in the hospital from several days to a week, oftentimes with an improvement in symptoms and temperature; but the patient was operated without recheck of the white cells. There were twenty-two patients in the elective series with a white cell count below 7,000, a leukopenia suggestive of low resistance reserve. This latter point is borne out by the fact that of the six deaths occurring on the operating table, three had leukopenias. Five patients did not have a white blood count or a differential. Twenty-four, or 32 per cent, of the seventy-five differential counts made were abnormal and there were eighteen not determined, making 45 per cent on this basis and 57 per cent as judged by the white blood count, in which further study should have been done before proceeding with the operation.

Blood Wassermanns. — Sixteen of the elective cases had positive blood Wassermanns. Eight were not recorded. Thus 18.8 per cent of those recorded had positive Wassermann reactions. The general hospital incidence was checked for two years of the period studied, and found to be 4.53 per cent and 4.6 per cent. An incidence of positive blood Wassermanns in the fatal cases of four and one-half times that of the general hospital admission would seem to indicate that this may have been a factor, at least, in some of the cases.

Preoperative Temperature. — Low grade, preoperative temperature has more significance than we like to attribute to it. In our desire to get a patient's operation over with, often reinforced by the patient herself and the relatives, we are prone to disregard low temperature rises. We get away with it many times, but pay the penalty often enough to cause serious retrospection. Polak and Tollefson,[3] in their excellent paper on mortalities, state that a low-grade temperature of 99.2 plus means infection, and that operation in such cases should be postponed until the temperature is normal and has remained so for several days.

Sedimentation Test. — There were only seventeen blood sedimentation tests done on the entire series of 121 cases. Nine tests were under sixty minutes, the time commonly accepted as the lowest rate for safe surgery, and eight of these nine were under forty minutes. The sedimentation test was used in only twelve of fifty proved inflammatory cases in our series. In nine of the twelve in which it was used, its dictum was disregarded. It would seem that we are not taking advantage of this valuable aid to help us solve the perplexing problem of pelvic inflammatory disease.

TABLE 3.—*Temperature Twenty-four Hours Before Operation*

Normal temperature—99 or below	47
99.2–100	29
100 –101	10
101 –102	3
102 –103	3
104.8–	1

61 per cent had temperature 99 or above.
50 per cent had temperature 99.2 or above.

To operate and when, or not to operate at all in a pelvic inflammatory case, is the question daily before the gynecologist. It is now generally conceded that palliative and conservative methods give the best results. According to Aldridge,[4] approximately one-half (48 per cent) of hospital cases either heal completely or become symptom free, making operation unnecessary. Operation is recommended in the chronic stage only if conscientious palliative treatment over long periods has failed, and for disability of attacks which tend to recur in spite of treatment. Then surgery should not be resorted to until the leukocyte count, temperature, and sedimentation time are normal. Polak,[5] Aldridge,[6] Greenhill,[7] and Baer [8] are only a few who concur in this opinion. The Shilling differential blood cell count is often very helpful in doubtful cases.

It is the policy on the gynecologic service to follow the conservative method in the treatment of these inflammatory cases. Many patients are discharged without surgery. In the vast majority of cases surgery was only used after palliative methods failed or after disabling recurrent exacerbations. Practically all were given the benefit of varying periods of preoperative rest in bed. Despite this policy and surveillance, too many were operated before the process was sufficiently quiescent. Pathologic examination showed eight in the series in which the condition was either acute or subacute. A closer check on preoperative status and laboratory requisites would undoubtedly have been of benefit to many of these cases.

Blood Pressure.—Accepting 110 to 150 as the normal limits of systolic blood pressure, we found sixty-three patients in this range. Thirteen were below 110, and seventeen were found above 150. There were seven real hypertensions in the group, the systolic reading ranging from 175 to 220. A survey of the charts of these thirty patients, or 32 per cent, who were either above or below the standard range, shows that many would have been benefited by additional rest before surgery or that further laboratory tests or consultations would have been of benefit.

Urinalysis. — Four patients were adjudged to have more than one plus albumin. Both albumin and pus were found in seven patients; two had positive sugar; two acetone; and in one case casts were found. Two patients had P. S. P. readings below 50 per cent the first hour, one 25 per cent, and another 30 per cent. Eighteen patients, or 20 per cent, had chemical or microscopical pathology in the urine, which increased the operative risk and probably contributed some part in the fatal outcome. Review of one case tells the story. A hysterectomy and bilateral salpingo-oöphorectomy was performed for chronic inflammatory disease, despite two urine examinations showing four plus pus and a preoperative temperature of 101

TABLE 4.—*Final Diagnosis—Fatal Cases*

Electives	93
Inflammatory	29*
Fibroid	19
Fibroid and inflammatory	17
Fibrosis	5
Procidentia	5
Hyperplasia	4
Retroversion	4
Dermoid ovary	1
Polyp and hyperplasia	1
Incomplete abortion	1
Adhesions—postoperative	1
Cystadenoma ovary	1
Ectopic	1
Cysto—rectocele	2
Prolapse vaginal vault	1
Erosion cervix	1

Malignancies	21
Cancer ovary and metastases	11
Cancer fundus	5
Cancer cervix	4
Sarcoma fundus	1
Emergencies	7
Pelvic abscess	4
Intestinal obstruction	2
Rupture gall bladder cyst	1
Total	121
Inflammatory Cases:	
Inflammatory	29
Fibroid and inflammatory	17
Pelvic abscess	4
Total	50—41%

* T. B. salpingitis—four cases.

degrees. She died the seventh postoperative day of general sepsis, immediately after a profuse secondary hemorrhage from the wound. Autopsy showed a large dissecting wound abscess leading from the abdominal wall through the groin into the left psoas muscle, general streptococcic peritonitis, and severe bilateral streptococcic pyelitis. The urine, laden with pus, was significant and undoubtedly played the important rôle in the tragic end.

Table 4 lists the final diagnosis of the fatal cases. Only the major diagnosis is given. Note the high incidence of pelvic inflammatory disease: twenty-nine straight inflammatories, seventeen fibroids with inflammation, and four acute pelvic abscesses, making a total of fifty cases—an incidence of 41 per cent. Pelvic inflammation materially complicates surgical procedures and increases operative risk.

OPERATIVE PROCEDURES IN FATAL CASES

There were 114 laparotomies in the fatal group, among which are included three patients who had vaginal hysterectomies and in whom the peritoneal cavity was entered from below. Eighteen, or 16 per cent, of these were "double cases." Six cases had vaginal operations alone. The final case completing the group of 121 was not operated—death coming after spinal injection and before a proposed posterior colpotomy was started.

There were eighty-three hysterectomies done in the series, and of these seventy-one were the subtotal, nine the total, and three the vaginal type. A total of thirty-one laparotomies, other than hysterectomies were done, including nine for malignant conditions and five in emergency cases.

OPERATING TIME

In most series of fatal cases the operating times are prolonged, and this fact is usually stressed as an important factor in the unhappy outcome. An analysis of the operating times in this series seems to show them to be an exception to this rule.

Table 5 shows the time required for the various operations.

We think these figures bear out the fact that the time consumed at operation in this series was not prolonged. In fact, since many were in technically difficult and complicated cases, the operating times here indicate rapid surgery, and will compare favorably with any nonfatal group for similar operative procedures. Apparently, then, the operating time was not an important factor in most of these fatal issues. In some that were prolonged it was.

ANESTHESIA IN FATAL CASES

In the fatal cases the anesthetic used was about evenly divided between ether and spinal. A total of sixty cases, or approximately 50 per cent, were given ether alone, fifty-three cases, or 44 per cent, were given spinal—ten in the spinal group had to be supplemented, six with ether and four with nitrous oxid; five cases (4 per cent) had nitrous oxid only, and in the remaining three local novocain was used.

TABLE 5.—*Operating Times*

Operation	Number Cases	Minutes			Comment
		Shortest	Longest	Average	
Hysterectomy S. Total	71	25	148	61	2 under 30 minutes 12 under 40 minutes 42 under 60 minutes—60%
Hysterectomy Total	9	64	190	102	Average 41 minutes longer than S. T.
Hysterectomy Vaginal	3	69	109	89	
Other laparotomies	31	8	108	43	27 under 60 minutes—87% 14 malignant and emergency cases 7 under 60 minutes—40%
"Double cases"	18	45	105	65	
Vaginal plastics	4	23	103	62	
Colpotomies	2	15	15	15	

Average operating time all cases—59.7 minutes.
Average 114 laps. with 18 "double cases"—60 minutes.

TABLE 6.—*Complications During Operation—Fatal Cases*

Sigmoid perforated	7
Bladder perforated	4
Cecum perforated	2
Rectum perforated	2
Ureter cut	2
Ileum perforated	1
Hemorrhage with clamps left in	1
Patient's hands in operating wound	1
	20

OPERATIVE COMPLICATIONS

The serious complications which occurred during operation are listed in Table 6, and the serious postoperative complications in Table 7.

Seven of the complications listed occurred in the malignancy, and four in the emergency group where there is often ample reason for such catastrophies. It was surprising to see how often the bowel or the bladder was injured and went unrecognized at the time of surgery—the complication becoming apparent only with the development of fistulae or discovered at autopsy, most of them occurring in complicated cases made difficult by inflammatory or postoperative adhesions. In forty-six, or 50 per cent, of the elective group, adhesions were listed as a factor.

Table 8 shows the interval between operation and death. Six patients died on the operating table. An additional nine lived less than twenty-four hours. The largest number of deaths occurred on the fourth and fifth days, when peritonitis takes its greatest toll. A total of eighty-five, or 70 per cent, died within the first ten days after surgery. The remaining thirty-six died at varying intervals, the longest 105 days after operation.

PRIMARY CAUSES OF DEATH

In determining the primary cause of death, the autopsy report, attending surgeon's note when present, resident's, internes' and nurses' notes, were all considered, and usually made the cause clear. Fortunately, 55 of the 121 fatal cases came to autopsy, with an additional case of postoperative intestinal obstruction reoperated, and diagnosis confirmed seven hours before death—really an antemortem autopsy. Thus, in 46.3 per cent of all operative deaths, and in forty-six, or approximately 50 per cent, of the ninety-three elective cases, postmortem examination gave the actual cause of death. We feel this is an excellent autopsy record and worthy of commendation. It is a much higher autopsy percentage than usually reported in similar mortality series. We think this greatly increases the value of any study of mortalities. It was interesting to note how frequently a clinical diagnosis of shock, cerebral accident or cardiac failure was replaced by peritonitis or hemorrhage when the case was subjected to autopsy examination.

Peritonitis was responsible for the death of forty-eight, or 40 per cent, of all cases in the series. Add to these the three cases listed as general sepsis and we have a total of fifty-one, or 42.5 per cent, dying of peritonitis and infection. Several of the deaths from peritonitis were directly attributable to injuries to the bowel, bladder or ureters during operation. The greatest incidence was in patients with inflammatory disease. A total of nineteen patients (20 per cent) in the elective group were presumably infected and were drained, three through the vagina. There were thirty-two (34.5 per cent) associated appendectomies in the elective group. We were unable to draw any definite conclusions regarding the effect of this additional procedure in the fatal outcome.

TABLE 7.—*Serious Postoperative Complications—Fatal Cases*

Intra-abdominal hemorrhage	16 (Autopsy 11, clinical 5)
Fecal fistula	8
Eviseration	3
Massive wound hemorrhage	3
Vesico-vaginal fistula	3
Vesico-abdominal fistula	2
Extensive cellulitis	3
	38

TABLE 8.—*Interval Between Operation and Death*

Death on table	6	11-15 days	10
Less than 24 hours	9	16-20 days	7
1 day	6	21-30 days	9
2 days	7	31-40 days	4
3 days	8	41-50 days	3
4 days	11	51-60 days	2
5 days	15	105 days	1
6 days	8		
7 days	3	Total	36
8 days	1		
9 days	7		
10 days	4		
Total	85		

In no less than four cases the appendix was described by the operator as being "bound down by dense adhesions," and technical difficulty was experienced in removal. In only one case was the appendix directly blamed for a fatal peritonitis. This case at autopsy exhibited an abscess around the appendix stump.

Next to peritonitis is hemorrhage; primary hemorrhage accounting for twelve, and secondary hemorrhage for three, for a total of fifteen deaths, or 12.4 per cent. A total of ten of the fifteen, or two-thirds, of the cases were verified by autopsy. Shock was next, with eleven fatalities (seven clinical and four autopsy diagnoses). It is probable that some of those clinically diagnosed as shock were hemorrhage. Shock and hemorrhage are usually considered together in such a study because, without autopsy, it is difficult to differentiate. Our high postmortem record in the bleeding cases made such a division possible. If we list these two together, we have hemorrhage and shock accounting for twenty-six, or 21.4 per cent, of the total deaths. Add to these twenty-six, another four cases in which hemorrhage was listed as an important contributing cause of death, and we are surprised by the size of the figures. Eight of the fifteen hemorrhage cases (53 per cent) occurred in the inflammatory group where raw surfaces and oozing areas made hemostasis

TABLE 9.—*Primary Causes of Deaths—All Cases*

	Clinical	Autopsy	Total	Percentage
Peritonitis	26	22	48	40.0
Hemorrhage—primary	4	8	12 }	12.4
Hemorrhage—secondary	1	2	3 }	
Shock	7	4	11	9.0
Embolism	5	6	11	9.0
Myocardial insufficiency	7	1	8	6.5
Pneumonia	2	4	6	5.0
Malignant cachexia	6	0	6	5.0
Ileus	1	2	3	2.5
Intestinal obstruction	1*	2	3	2.5
Sepsis	2	1	3	2.5
Anesthesia	0	2	2	1.6
Cardiarenal	1	0	1	.8
Cerebral accident	1	0	1	.8
Acute dilated stomach	0	1	1	.8
Diabetic coma	1	0	1	.8
Uremia	1	0	1	.8
Totals	66	55	121	100

* Confirmed by reoperation seven hours before death.
Autopsies—All cases 46.3%
Autopsies—Elective cases 49.5%

difficult. There were four fatal hemorrhages, however, which occurred in relatively easy cases. All four were subtotal hysterectomies in which the operator, in describing the operation, used terms such as "simple procedure," "minimal shock," "without difficulty." These hysterectomies were completed in an average time of twenty-nine minutes. A few additional minutes for checking or re-ligating vital areas might have changed the outcome.

Embolism shared honors with shock with eleven, or 9 per cent. The following facts stand out in this group: six of the eleven (54 per cent) were afebrile before surgery, which is about the same ratio as all cases. In this group, seven of the eleven (64 per cent) had vaginal plastic work done, either alone or associated with laparotomy; while only twenty-five of the 120 operated cases (20 per cent) had vaginal plastic work. Thus, seven of the embolic deaths occurred in the twenty-five vaginal cases, an incidence of 28 per cent, while the remaining ninety-five cases, in which no vaginal plastic work was done, accounted for only four embolic deaths, an incidence of 4.2 per cent. Of the eleven, four, or 36 per cent, had uterine fibroids, whereas fibroids made up 30 per cent of the entire group. In only two of the seven autopsied were thrombi or pathology demonstrated in the pelvic veins.

Myocardial insufficiency followed with eight, and cardiorenal disease with one, making a total of nine, or 7.4 per cent, in which cardiac failure was the primary factor. Four of the eight were obese; only three gave any indication in their histories of possible cardiac pathology. There was no record of previous decompensation in the entire group. In the preoperative examination definite cardiac pathology was found in three, and in two others it was questionable. In this group, six of the eight had fibroids of the uterus and one of the two remaining had a fibroid polyp. The association of myocardial disease and fibroids has before been noted repeatedly. Excessive surgery for a minor complaint was the outstanding factor in the cardiorenal death.

Pneumonia and malignancy and cachexia have six each, or 5 per cent. Of the six patients who died of pneumonia, four were aged—over sixty years. Only one showed pulmonary pathology at preoperative examination. Respiratory anesthesia did not prove to be the chief offender. On the contrary, three of the six cases had only spinal; one had spinal, supplemented with nitrous oxid and ether; one had only ether and one had local novocain.

The six deaths that occurred on the operating table are of sufficient interest to analyze briefly. Pelvic inflammation was present in five of the six; two were obese, 220 and 250 pounds; two had cardiac disease; three had leukopenias, and one no blood count at all. Ether was the anesthetic in four, nitrous oxid and ether in one, and spinal in one. All cases were autopsied and causes of death were as follows: Operative shock, two; cardiac failure, two; anesthesia, two. One of the two anesthetic deaths had ether for eighty-five minutes, the operation requiring seventy minutes. Autopsy report was "etherization with somewhat persistent thymus weighing 33 grams." The spinal death was the only case in the entire series not operated. A posterior colpotomy was proposed, but the patient died five minutes after 100 milligrams of novocain had been injected. The obesity

Table 10.—*Operative Complications—Total Hysterectomy Group*

Benign cases:	
Oozing cul-de-sac—packed to control	2
Bladder opened	1
Both ureters cut	1
Malignant cases:	
Ureter cut—vesicovaginal fistula	1
Cecum and sigmoid opened—vesico-vaginal fistula	1
Vesicovaginal fistula	1

Average time 41 minutes (67%) longer than subtotal.
Operative complications frequent.
75% died of peritonitis.

(220 pounds), low blood pressure (80/60), the Trendelenburg position, and the general toxemia from peritonitis secondary to a pelvic abscess, were the factors which made the patient a poor spinal risk.

COMMENT

An analytical review such as this must necessarily be incomplete. It is always of more interest and benefit to the reviewer than to the reader. A survey of the entire study brings up many interesting sidelights and points for discussion. The following seem timely and to be of some value:

Total Versus Subtotal Hysterectomy.— In recent years there has been considerable interest in the advantages of total versus subtotal hysterectomy. In our series of fatal cases there were too few total hysterectomies to justify definite conclusions. However, certain facts are interesting and somewhat indicative. Six were done for benign conditions, and three for malignancies. The operating time averaged 102 minutes, 41 minutes longer than the average for the subtotal operation. In only two cases out of nine were no special complications mentioned in the dictated operative record.

In our series the total hysterectomy operation required 67 per cent longer time to perform; was replete with serious operative and postoperative complications, and 75 per cent of the cases died of peritonitis.

Diagnostic Dilatation and Curettage.—The diagnostic dilatation and curettage seems to have lost its popularity. This valuable diagnostic procedure was not employed once in the entire series of 121 fatal cases. One dilatation of the cervix was done and a pyometria discovered which prevented a contemplated Watkins interposition operation. A diagnostic dilatation and curettage, and pelvic examination under anesthesia, often help materially to clear up a diagnosis, and shorter and simpler operative procedures can be done, amply caring for the pathology. A review of the cases shows it would have been of decided value in at least eleven cases, and undoubtedly would have changed the operative procedure in an additional five cases of malignancy. The question is raised, should not all puzzling menorrhagias and metrorrhagias have a diagnostic curettement?

Radiotherapy.—While on the subject of more conservative procedures being curative, the question of radiotherapy comes up. In some of the patients in this series its use might have been seriously considered. A careful study of the cases, constantly keeping in mind the conditions, indications, and especially the contraindications for its use, shows that radium might have been used to advantage in some twenty patients in the group. It would have been satisfactory in three of the eight fatal myocardial cases.

Radiotherapy has a definite place in gynecology. It must be used with judgment and with proper regard for its indications and contraindications. It is not a "cure-all," and has definite, sharply defined limitations. Keeping this in mind, it is often the most conservative curative measure—many times life-saving—where other operative procedures would and do prove fatal.

SUMMARY OF STATISTICS

In a series of 4,029 gynecologic operations at the Los Angeles County Hospital there were 121 deaths—a gross operative mortality of 3 per cent. Two thousand three hundred and fifty-two were hysterectomies, with a mortality of 3.5 per cent. Eighty-seven per cent of the entire group were laparotomies and 13 per cent vaginal cases only.

In the 121 cases, twenty-one were malignancies, seven were emergencies, and ninety-three were so-called elective cases. In the elective group the more frequent diagnoses encountered were: pelvic inflammatory, twenty-nine; fibroids and inflammatory, seventeen; and fibroids, nineteen.

The most frequent causes of death were as follows: peritonitis and sepsis, 42.5 per cent; hemorrhage and shock, 21.4 per cent; embolism, 9 per cent; cardiac failure, 7.4 per cent; pneumonia, 5 per cent; and malignancy and cachexia, 5 per cent. Autopsies were performed in 46.3 per cent of all cases in the series, and in approximately one-half of the elective group.

There were twenty serious complications during operation, and thirty-eight serious postoperative complications.

CONCLUSIONS

Preoperative study and care are of the greatest importance. Despite the average stay of one week in the hospital prior to operation, inadequate studies were made in too many of the cases. Additional laboratory work and more consultations would have benefited many patients.

Too often, the physical and laboratory findings and important preoperative requisites that make for good operative risks were disregarded.

More preoperative blood transfusions in the anemic and border-line cases are indicated.

Despite knowledge and efforts to the contrary, patients with pelvic inflammatory disease are being operated too early and too often. The sedimentation test is not being used sufficiently in these cases.

A closer check of the patient's complaints with the operative procedure would prove of value. The diagnostic dilatation and curettage should be used more frequently.

In certain poor-risk cases where indications are met, radiotherapy should be considered.

Considering the type of patients and the operative risks, the operative mortality here reported compares favorably with that reported by similar clinics.

REFERENCES

1. Norris: Surg. Clinics N. America, p. 1009 (Oct.), 1929.
2. Ward: Wisconsin Med. J., 23:489 (Feb.), 1925.
3. Polak and Tollefson: Gyn. Transactions, p. 170, 1928.
4. Aldridge: A. J. Obs. and Gyn., Vol. 26, No. 5, p. 715 (Nov.), 1933.
5. Polak and Tollefson: Gyn. Transactions, pp. 172, 180, 1928.
6. Aldridge: A. J. Obs. and Gyn., Vol. 19, No. 3, pp. 382, 391 (March), 1930.
7. Greenhill: A. J. Obs. and Gyn., Vol. 24, No. 2, p. 183 (Aug.), 1932.
8. Baer: Gyn. Transactions, p. 179, 1928.

DISCUSSION

L. M. Emge, M. D. (2000 Van Ness Avenue, San Francisco). — The excellent analysis presented by Doctors Marshall and Thompson constitutes a very courageous document. I have a great deal of respect for the chief of a large service who has the courage to permit the publication and discussion of such a document. At best, any analysis of this sort will invite some just, and some unjust, criticism. For instance, why should patients be operated on during the acute stage of pelvic inflammatory disease, unless it be for the simple drainage of a pelvic abscess? The essayists point out that all surgical patients are housed for at least one week prior to operation. This certainly is enough time to segregate the poor from the good surgical risks, so that there remains no excuse for undertaking major surgery on patients who are still in the stage of acute infection, or who otherwise constitute a questionable surgical risk. There certainly exists no emergency in most of these patients; therefore, why not reduce the surgical risk by conservative medical measures? Most operations can wait. I appreciate that in a large service the head of the department cannot be in such intimate contact with details that he can pass on every case. This is a matter for the division chiefs to decide. In an analysis such as presented here, the work of the individual division should be compared, so that one might learn what operators have the lowest mortality. I am sure this would be very salutary and invite competition for lower mortality records.

I do not like to appear to be critical, and I do hope that my remarks will be considered in the spirit of friendly analysis. May I, therefore, be pardoned for saying that the high mortality in cases of malignancy indicates a rather reactionary method of surgical therapeusis; for, certainly, surgery of the malignant cervix must be seriously questioned except in the very early localized tumors, and even these are perhaps more successfully treated by irradiation, as far as mortality is concerned.

Table 1.—*On Operations at Lane and San Francisco Hospitals*

OPERATIONS—1924-1934		Deaths	Per Cent
Lane Gynecological Service:			
Major	995	22	2.2
Minor	703	2	0.28
Total	1,698	24	1.4
San Francisco Hospital and Stanford Gynecological Service:			
Major	1,379	46	3.3
Minor	1,844	3	0.1
Total	3,223	49	1.5

Table 2.—*On Hysterectomies at Lane and San Francisco Hospitals*

HYSTERECTOMIES—1924-1934		Deaths	Per Cent
Lane Hospital:			
Abdominal, Complete	307	10	3.2
Abdominal, supravaginal	265	8	3.0
Vaginal	73	0	
Total	645	18	2.8
San Francisco Hospital:			
Abdominal, complete	196	8	4.0
Abdominal, supravaginal	408	12	2.9
Vaginal	28	4	14.3
Total	632	24	3.9

May I also say that the time element in operations is not anywhere nearly as important as we are made to believe; for good anesthesia, gentle handling of tissues, the selection of patients, the preoperative care, and transfusions permit a more deliberate surgical approach, with a resultant reduction in postoperative complications. Fifteen per cent of all deaths because of secondary hemorrhage after hysterectomy is a rather serious indictment against spectacular speed in surgery, unless it can be blamed upon lack of skill.

The surgical service of the department of obstetrics and gynecology at Stanford is not as large as the one represented here by Doctors Marshall and Thompson. In our combined clinic services at Lane and San Francisco hospitals, over a period of ten years, there were 4,921 operations, with slightly less than 1.5 per cent mortality. If you will compare the figures between the two services, you will also see that there is also a slight difference in mortality rates, in which that of the service at San Francisco Hospital corresponds closely to the figures shown here.

Nevertheless, the total figure for all operations is considerably lower because of the dilution by minor operations. If you take the hysterectomies, on the other hand, and compare the end-results of our services with that of the Los Angeles General Hospital, you will find that the total figure is approximately the same, although there is again a marked difference between the figures of the Lane Hospital Service, as compared with the San Francisco Hospital service. I particularly point to the difference in vaginal hysterectomies, in which there were no deaths on the Lane service. Our figures bring out one factor: that the mortality rate for complete and supravaginal hysterectomies may be kept at an equal level, as shown in the figures of the Lane service. It is also interesting to note that hysterectomies made up about 46 per cent of the major operations at our San Francisco Hospital service, and 65 per cent at the Lane service.

Peritonitis was the commonest cause of death on both services, constituting about one-fourth of our mortality. We had no deaths from secondary hemorrhage. Cardiac failure and intestinal complications made up the bulk of the remainder of the causes. Embolus and shock were rare. Carcinomatosis, discovered at exploratory laparotomies, is included in this group as a cause of death.

The number of operators for the two services varies between nine and ten. . . .

May I say, in conclusion, that the figures I have shown here are not presented in a spirit of righteousness, but only as a matter of comparison. I consider it a great privilege to have been asked to discuss this paper, and I wish to extend congratulations and thanks of this section to the essayists for having undertaken this extensive piece of work.

CARDIOSPASM

SUCCESSFULLY TREATED BY HYDROSTATIC DILATATION

By Gunther W. Nagel, M.D.
San Francisco

Discussion *by William J. Kerr, M.D., San Francisco, and William Dock, M.D., San Francisco.*

CARDIOSPASM, or spasm of the lower end of the esophagus, is a well-recognized clinical pathologic entity. The obstruction is intermittent at first and results in gradual distention of the esophagus. In advanced cases obstruction may be continuous and almost complete. Dysphagia and substernal pain are prominent symptoms.

Treatment consists of forceful dilatation of the spastic area. Different means have been employed to accomplish this. A satisfactory method is hydrostatic dilatation with the Plummer dilator.

In reviewing the histories of patients with cardiospasm seen at Stanford Clinic and in private practice, it is apparent that previous treatments, such as the administration of antispasmodic drugs and the passing of bougies, have given unsatisfactory results. The following cases are presented to illustrate the good results obtained by forceful dilatation of the spastic area.

REPORT OF CASES

Case 1.—No. 104849. Female. Age, 57. Six years ago the patient was suddenly seized with a gagging and choking sensation after eating. Following this she had periodic attacks of difficulty in swallowing both liquids and solids. She did not vomit food, but regurgitated considerable saliva and mucus. The food seemed to stick under the lower end of the sternum. X-ray showed tremendous dilation of the esophagus due to cardiospasm. She had lost forty pounds within the six months previous to examination. The Wassermann reaction was negative. Other laboratory examinations were of no significance.

Following hydrostatic dilatation she was completely relieved of her symptoms, and x-ray showed the esophagus to empty rapidly.

Two months after dilatation the patient remained relieved of her symptoms. She has not been heard from since.

* * *

Case 2.—No. A9613. Female. Age, 27. A year ago the patient began to have attacks of pain in the epigastrium, coming on usually at night. For two months previous to examination she had difficulty in retaining food, even when taken in small amounts, regurgitating both liquids and solids. Occasionally after eating she had a sensation of the stricture opening up and allowing food to pass through. She lost twenty-seven pounds during this period. X-ray showed a spasm of the cardia with a small amount of barium retained in the esophagus after six hours (Fig. 1). Other laboratory examinations, including the Wassermann test, were negative.

Following hydrostatic dilatation she reported that she had occasional slight substernal pain early in the morning, but she had no difficulty in swallowing and did not regurgitate.

Two and one-half years later the patient reports that while she has been very much improved, occasionally she still has a little difficulty in swallowing. She has gained eleven pounds since dilatation.

* * *

Case 3.—No. A11660. Female. Age, 39. For a period of four months the patient had increasing difficulty in retaining food. At the time of examination apparently nothing she ate was retained, and she lost fifty pounds in weight. The x-ray diagnosis was cardiospasm. The hemoglobin test showed 66 per cent; otherwise the laboratory findings were negative.

The passage of a No. 60 French olive failed to give relief, so hydrostatic dilatation was done. She complained of considerable soreness over the lower part of her chest following this procedure, and developed a patch of pneumonia in the lower left lobe with possible mediastinal effusion. This complication may have been due to a slight splitting of the esophagus as a result of the dilatation. She made a quick recovery, has regained her normal weight and has been entirely cured of her dysphagia. When last heard from, two and one-half years after the treatment, she had no recurrence of her former symptoms.

* * *

Case 4.—No. A19329. Male. Age, 48. A year previous to our examination this patient's trouble began with a feeling of fullness in the epigastrium. For a period of five or six months he had been vomiting at night shortly after going to bed. These symptoms gradually grew worse. The x-ray showed spasm of the lower end of the esophagus (Fig. 2). Laboratory findings, including a Wassermann test, were negative.

Following hydrostatic dilatation, the patient was completely relieved of his symptoms and has remained so for a period of a year and a half. He has no difficulty whatever in swallowing, and feels very well.

* * *

Case 5.—No. 177949. Female. Age, 60. The patient's complaint was difficulty, for a period of six years, in swallowing. She had lost 100 pounds in weight. Two and a half years previous to examination, a diagnosis of inoperable cancer of the esophagus was made elsewhere.

She had a marked secondary anemia—hemoglobin, 68 per cent, red blood cells, 3,600,000. The x-ray's diagnosis was cardiospasm (Fig. 3).

An abdominal exploration was done, and the cardiac end of the stomach and lower end of the esophagus were found to be surrounded by adhesions, which were freed. Following this operation the patient continued to regurgitate practically everything she ate. Two weeks later hydrostatic dilatation was done, and she was entirely relieved of her dysphagia. She gained eleven and a half pounds during the following six months.

She writes, two and a half years following dilatation, that she does not feel well and that she regurgitates her food occasionally. She has numerous complaints not related to the gastro-intestinal tract.

* * *

Case 6.—No. A5594. Female. Age, 26. About a year ago the patient began to experience a feeling of weight in the epigastrium, which appeared about twenty minutes after eating and was frequently followed by regurgitation of ingested food. She had no pain.

A diagnosis of cardiospasm was made and the spastic area was dilated elsewhere by means of an air-filled balloon. She did not obtain relief from this procedure. Following hydrostatic dilatation, she was completely relieved of all her symptoms.

* * *

Case 7.—No. 197595. Female. Age, 33. The patient entered the clinic complaining of cough, fever, and loss of weight. A diagnosis of active pulmonary tuberculosis was made. In addition, she complained of difficulty in swallowing and, for a period of six years, frequent regurgitation of undigested food. The x-ray revealed a spasm of the cardiac end of the esophagus (Fig. 4). Sputum showed tuberculosis bacilli. Other laboratory examinations, including Wassermann test, were negative.

Hydrostatic dilatation was followed by complete relief of the dysphagia. Marked improvement in the pulmonary condition also followed after treatment in a sanitarium. At the present time, three and a half years later, the patient reports that she is in good health, has gained twenty-two pounds, but still has some slight difficulty in swallowing if she takes solid food in large amounts.

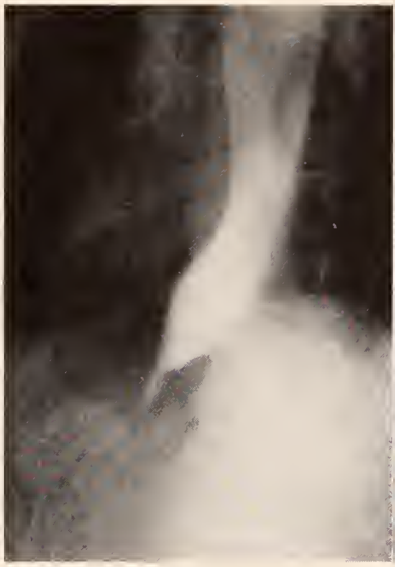

Fig. 1

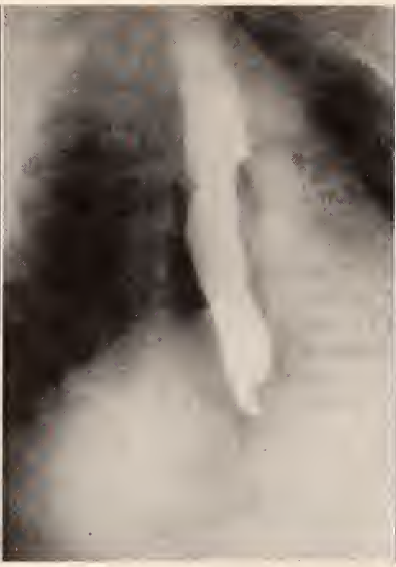

Fig. 2

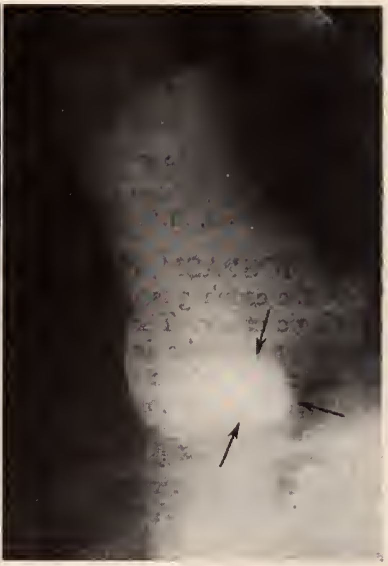

Fig. 3

Fig. 1.—Cardiospasm showing typical cone-shaped dilatation of the esophagus above the spastic area.
Fig. 2.—Cardiospasm. Atypical x-ray picture difficult to differentiate from cancer of the cardia.
Fig. 3.—Cardiospasm with markedly dilated and tortuous esophagus.

Case 8.—E. O. M. Male. Age, 48. Intermittent dysphagia over a period of four years was the patient's complaint. Liquids and solids appeared to stick under the lower end of the sternum; and in order to aid their passage he had formed a habit of standing while eating and forcing the food down with vigorous swallowing movements. An attempt had been made elsewhere to dilate the spastic area with the Plummer dilator, but he obtained no relief. Apparently the dilator had not been properly placed, as the patient suffered no pain while the bag was being distended up to 26 feet of water pressure. This patient also had a complicating pulmonary tuberculosis.

Following hydrostatic dilatation, he was completely relieved of his dysphagia. After a period of five months he still has no difficulty in swallowing.

* * *

Case 9.—No. A36257. Male. Age, 40. This patient's complaint was intermittent dysphagia of five years' duration. Solids and cold liquids caused the most trouble, and appeared to stick in the epigastrium. While his food was thus lodged he had severe cramps under the sternum. He obtained relief by vomiting or taking warm liquids. The x-ray showed a cardiospasm with 25 per cent residue in the esophagus after six hours. He was dilated with a 45 French olive followed by a 60 French olive, and entirely relieved of his dysphagia. Four months have elapsed since this was done, and should his symptoms return, hydrostatic dilatation will be done.

* * *

Case 10.—E. T. Female. Age, 21. For the past two years ingested food, both liquid and solid, appeared to lodge for a time in the lower end of the esophagus. This patient had considerable epigastric pain. The x-ray showed cardiospasm.

Following hydrostatic dilatation the food passed freely into the stomach, pain ceased, and she gained ten pounds in weight. She had no return of symptoms a year after dilatation.

* * *

Case 11.—S. C. Male. Age, 23. Beginning seven years ago this patient commenced to have intermittent attacks of difficulty in eating. Liquids and solids lodged in the lower end of the esophagus, and caused considerable pain. Later his symptoms were more constant and gradually increased in severity. Small amounts of food eventually passed through, but large quantities were regurgitated.

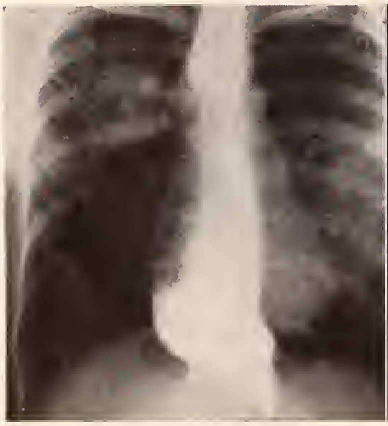

Fig. 4

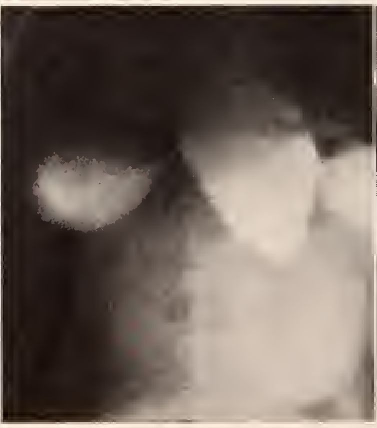

Fig. 5

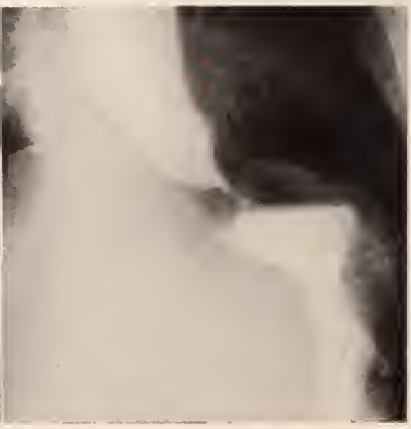

Fig. 6

Fig. 4.—Cardiospasm with tortuous and dilated esophagus and pulmonary tuberculosis.
Fig. 5.—Cardiospasm with marked dilatation of the esophagus.
Fig. 6.—Cardiospasm with some barium passing into the stomach.

Several physicians were consulted at different times, all of whom made the diagnosis of cardiospasm, but none of whom was able to give him any relief.

It is now six years since hydrostatic dilatation was done. He was immediately relieved of his symptoms, and has had no recurrence of his trouble. He has gained fifty pounds in weight.

* * *

Case 12.—H. D. Female. Age, 28. The patient had had intermittent difficulty in swallowing both liquids and solids for a period of eleven years. Her trouble had been gradually growing worse, and six months previous to examination she took chloroform liniment with suicidal intent. Prompt attention saved her. The x-ray showed a spastic cardia and dilated esophagus (Fig. 5). Complete relief from symptoms followed hydrostatic dilatation.

* * *

Case 13.—T. J. D. Female. Age, 25. For three and one-half years the patient had difficulty in swallowing liquid and solid food. At the onset this condition had been intermittent, but for fourteen months previous to examination it had become constant. Pain became an increasingly severe symptom. The x-ray showed a cardiospasm (Fig. 6). An attempt to dilate the spastic area by esophagoscopy was unsuccessful on two occasions.

Dysphagia has been entirely cured following hydrostatic dilatation. She recently complained of some discomfort after meals, but this has been relieved by a little care in the selection of her food, something which had not appealed to her after so long a period of dysphagia.

* * *

Case 14.—M. G. Female. Age, 23. The patient for a year complained of difficulty in swallowing. The onset was quite sudden, with the lodging of food under the lower end of the sternum. Liquids caused as much difficulty as solids. She lost twenty-five pounds in weight during the year. A number of physicians were consulted, but no relief was obtained.

The x-ray showed cardiospasm, with considerable dilatation of the esophagus.

Dilatation was done up to fifteen pounds of water pressure, but this gave only temporary relief. A second dilatation was done a month later and the pressure used increased to twenty-five pounds. This has given complete relief, and she has gained thirty pounds in weight. It is fifteen months since the second dilatation.

* * *

Case 15.—J. M. Female. Age, 30. This patient complained of difficulty in swallowing since childhood. Pain under the sternum was a distressing symptom. She had been dilated with bougies several times, but had been little relieved. The x-ray showed a typical cardiospasm. The spastic area was dilated with a size 60 French olive.

The patient has been relieved of her dysphagia, but will probably require hydrostatic dilatation at a later date.

SUMMARY OF CASES

The histories of fifteen patients with cardiospasm have been reviewed. Eleven patients were women and four were men. The oldest patient was sixty years of age, the youngest twenty-one years of age, the average age being thirty-five years. The average duration of symptoms was five years. Thirteen patients were treated by hydrostatic dilatation; two were dilated with a size 60 French olive. Twelve patients have remained cured over periods ranging from several months to over six years. The other three patients were greatly relieved of their symptoms, but still complained of slight dysphagia at times.

MEDICAL TREATMENT OF CARDIOSPASM

Mild cases of cardiospasm without x-ray evidence of delay in emptying the esophagus may be successfully treated by medical means. An illustrative case follows:

No. A24968. Female. Age, 60. The patient complained of spells of nausea and vomiting for the past seventeen months. During attacks she experienced a sense of constriction under the lower end of the sternum. The x-ray showed a normal esophagus. The diagnosis was mild cardiospasm. The patient was given tincture of belladonna and elixir of sodium bromid, and two months afterward she reported that she was much improved and had very little difficulty in swallowing.

SURGICAL TREATMENT OF CARDIOSPASM

In a very occasional patient simple dilatation cannot be done and surgery is indicated. Doctor Judd and I have reported such a case. In this patient the esophagus was so dilated and tortuous that, while the thread was successfully swallowed, it was, nevertheless, impossible to pass sounds without great danger of injuring the esophagus. A gastrostomy was done, and the cardia dilated manually from below. The patient was much improved following this, but not entirely cured. Some months later hydrostatic dilatation was successfully done.

Plastic operations have been done on the cardia, but they have not been uniformly successful and the mortality is quite high. Hydrostatic dilatation in most cases is simpler, more satisfactory and much less risky than operative procedures.

INCIDENCE OF CARDIOSPASM

Cardiospasm is considered quite rare, but I believe that mild forms of it are more common than is generally thought. Temporary spasm of the cardia has undoubtedly been experienced by large numbers of individuals. Almost everyone has at times had severe substernal pain on gulping some cold liquid when he was hot and tired. This is a temporary cardiospasm and in most individuals the discomfort suffered is sufficient warning to prevent a repetition of its cause.

Cardiospasm occurs most frequently in relatively young women. It may be associated with other lesions, notably cholecystic disease and peptic ulcer, but usually it exists alone. Though a definite etiology has not been established, it is considered to be of nervous origin. The condition, however, is definitely not a neurosis, but a true organic lesion.

DIAGNOSIS

The majority of patients with cardiospasm give a history of periodic spells of difficulty in swallowing lasting over a period of years. In the early stages the spasm is intermittent, and there may be long periods of freedom from trouble. Gradually, however, the spasms occur with more frequency, and finally the patient is unable to take any type of food in comfort. In the beginning liquids, especially cold liquids, often cause more trouble than solid foods. In the later stages solid foods also give trouble. The patients usually describe the ingested food as sticking or lodging under the lower end of the sternum. They adopt various procedures to force the food through.

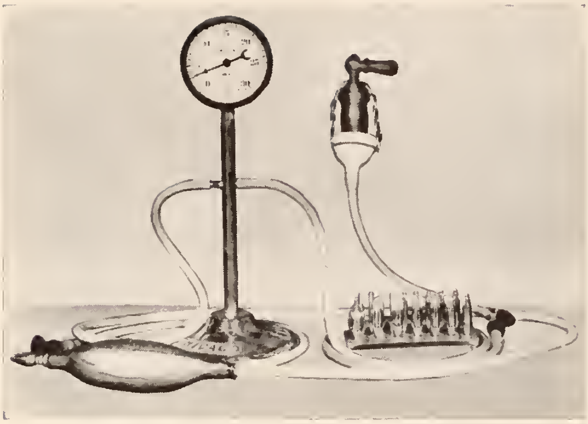

Fig. 7.—Plummer hydrostatic dilator.

Some obtain relief by standing and drinking large quantities of fluids, forcing the spasm by means of pressure from above. Others, by closing the glottis, seem to be able to compress the esophagus by means of increased intrathoracic pressure and thus force the food through the constricted area. Still others find that they can eat only small amounts at a time and, following varying intervals, the spasm temporarily releases itself. To obtain relief, almost all the patients in advanced cases regurgitate a certain amount of the food taken.

In spite of difficulty in swallowing, many of these patients go on for years without any great loss of weight or strength, while some become markedly emaciated and anemic.

The condition has to be differentiated from cancer of the esophagus and benign organic stricture. The long history, its intermittency in the early stages, and the characteristic x-ray appearance differentiate cardiospasm from cancer. However, in two of my patients a previous diagnosis of cancer had been made. Organic stricture can also be differentiated on the basis of the history and x-ray appearance.

PATHOLOGY

The spasm occurs usually in the esophagus above the cardia at the level of the esophageal hiatus of the diaphragm. The esophagus becomes gradually dilated above this point. The dilatation may be two or three times the normal diameter of the esophagus, and in some instances the saculated esophagus appears by x-ray to take up as much as a third of the available space in the thoracic cavity.

Pathologic examination in such cases shows the wall of the esophagus to be greatly thickened, and firm at the point of narrowing, while above, in the dilated area, the musculature is more or less hypertrophied, but shows no other marked changes. Usually in advanced cases there is some evidence of inflammatory reaction. There may be small superficial mucosal ulcers present, but these appear to be secondary to the spasm and not a cause of it. So-called peptic ulcers in the lower end of the esophagus occasionally occur, and may produce a certain amount of spasm; but such cases are not included in this group.

TREATMENT

Cardiospasm is treated by forcefully dilating the constricted area. The method used in this series was that of hydrostatic dilatation by means of the Plummer bag, with a previously swallowed silk thread as a guide (Fig. 7). This is the method described by Plummer and Vinson. The procedure is as follows:

The patient is first instructed to swallow five to eight yards of silk thread. The purpose of the thread is to furnish a guide for the passage of sounds and dilator. It is an absolutely essential part of the procedure, in that it inevitably guides the instrument to the proper opening, and prevents the possibility of forcing the dilator into a false pocket and thus rupturing the esophagus. A glance at some of the x-rays in these cases shows that the esophagus at times turns almost at right angles before entering the stomach, and illustrates how easily an independently passed sound might perforate it (Figs. 3 and 4). A spool of buttonhole silk, size "D," is satisfactory, and is easily obtained. The first few feet are swallowed slowly so that the end of the thread may find its way through the point of spasm. After this it may be swallowed a little more rapidly until it passes through the stomach and into the intestines. When this has occurred, it is drawn down by the peristaltic action of the intestines and soon becomes firmly anchored. It is advisable to tell the patient to fasten or hold the thread while eating so that too much is not taken in at a time, which might result in the thread becoming snarled. From twenty-four to thirty-six hours is the usual time required for the thread to become sufficiently well anchored to serve as a guide for the passage of sounds. Patients frequently protest in the beginning that they will be unable to swallow the thread, but when properly coaxed they never fail to do so, and it always passes through even the smallest stricture.

Before dilating, the esophagus should be empty to prevent regurgitation and possible pulmonary complications, as a result of the passage of regurgitated material into the trachea during instrumentation.

The patient is placed in a low chair with a curved seat, designed to prevent his slipping forward during the passage of the instruments. The dilatation is done without anesthesia, because one of the determining points as to whether the dilator has been properly placed or not is the pain which the patient has at the time of dilatation.

A No. 45 French olive, with a filiform tip, is first fastened to a whalebone staff and guided into the esophagus over the previously swallowed thread which must be held taut during this procedure. At the point of spasm, a resistance to its passage is felt; but with moderate pressure this is overcome and the dilator slips through into the stomach. This procedure confirms the diagnosis of spasm as against an organic stricture, which is unyielding and does not permit the passage of so large a dilator. The distance of the strictures from the patient's incisor teeth is marked off on the whalebone staff. This distance is now measured off on the hydrostatic dilator and it is passed in a similar manner over the thread. When the dilator is in the correct position, the water is turned on and the pressure in the bag is increased up to the desired point by compressing the outlet tube. As soon as the gauge registers the desired pressure, usually from 15 to 20, the water is released and the bag removed. The thread is cut off close to the patient's mouth and the remainder swallowed.

RESULTS OF TREATMENT

In nearly all my cases a single dilatation has been successful. In two patients two dilatations were necessary. In one instance the patient developed a pulmonary lesion, which may have been the result of a slight splitting of the esophagus or an aspiration pneumonia. The patient recovered after a brief illness. In two patients the hydrostatic dilator was not used, but a size 60 French olive was used in its stead. These patients also obtained complete relief.

Patients usually complain of a little soreness under the lower end of the sternum after treatment, but this passes off after a day or two. The spasm is relieved immediately, and the patients are able to eat a large meal without difficulty a few hours after the procedure.

CONCLUSION

The results following hydrostatic dilatation of cardiospasm are so gratifying to both patient and doctor that it seems worth while to again call attention to this fact.

2000 Van Ness Avenue.

DISCUSSION

William J. Kerr, M.D. (University of California Hospital, San Francisco).—It has given me a great deal of pleasure to read Doctor Nagel's instructive paper on "Cardiospasm." There is not much doubt that most of the patients described by Doctor Nagel, in reporting his experience in fifteen cases, have reached the stage where forceful dilatation of the cardiac sphincter is perhaps necessary in their treatment. The condition is somewhat analogous to the pylorospasm occurring in infants, where the tissue becomes extremely rigid and would remain permanently so unless some mechanical measures were employed to relieve it. In my opinion, these two conditions are examples of structural change which results from long-standing functional disturbance.

If one can recognize patients who have a tendency to cardiospasm, and can approach them from the standpoint of functional disturbance, going into their psychological problems and treating them first in an attempt to remove the cause of their trouble or to make the situation in which they find themselves comprehensible to them as a cause for their symptoms, I am sure that a good deal can be done to prevent the later stages which Doctor Nagel rightfully suggests should be treated by forceful dilatation. It may be necessary to make use of sedatives and antispasmodic drugs, and to treat the autonomic nervous system either on the parasympathetic or, perhaps, on the sympathetic side; but this must be handled in an individual manner on the patients as they present themselves. If one follows the directions which have been given by the author, there is very little probability of injury to the tissues around the lower end of the esophagus, and one is not likely to have mediastinitis or other local infections arise following trauma to the tissues and perhaps extension of infection from the lumen of the esophagus or stomach.

William Dock, M.D. (Stanford University Hospital, San Francisco).—The treatment of cardiospasm by forceful dilatation, with a dilator of large caliber, is one of the most satisfactory therapeutic procedures in all medicine, as those of us who have followed Doctor Nagel's cases, or cases similarly treated elsewhere, are well aware. While the treatment must be used with strict care as to its details, and preferably only after much experience in assisting at the operation, the actual discomfort and risk to the patient are not great enough to justify other forms of therapy except under unusual circumstances. Mild cases unable to obtain such therapy may be controlled by allowing them to pass a mercury-weighted Ewald tube before and after meals, as described by Arthur Hurst in 1924, and very long-standing cases with tortuous gullets may require gastrostomy, retrograde dilatation and other procedures; but the majority of instances met with in practice are best managed by the technique described here. It should be noted that the disturbance affects the lower esophagus, and is due to its failure to relax as the peristaltic wave comes down. A tube passes through easily, and is not gripped as the spastic anal sphincter grips the examining finger. But only forceful overdilatation can be relied on to give more than transient relief.

THE LURE OF MEDICAL HISTORY†

MEDICAL CONDITIONS, PRACTICES, AND FOUNDATIONS IN THE CONTINENTAL COLONIES*

By Harold Hanzlik†
San Mateo, Calif.

PART II‡

INDIAN CONTRIBUTIONS

HOWEVER, Governor Winthrop's son, J. Winthrop, Jr., copied some worth while things from his red-skinned friends. A short discussion of these will indicate the contributions of the Indians. Doctor Winthrop praised their use of tobacco, saying, "The juice of the green leaf healeth green wounds, although poysened" (Packard). The juice referred to by Winthrop contains nicotin, which acts as an antiseptic, but, if used too liberally, as a strong poison. Winthrop adopted this remedy for his formulary. The Indians, like the colonists, knew about cauterizing wounds to prevent infection. The Indians used cauterization in a very novel way to keep prisoners from running away. Winthrop states that the Indians cut away half of a prisoner's foot, then took the skin and wrapped it over the wound and cauterized it, thus preventing the prisoner from running because he had only half a foot. The Indians also knew about cascara, a drug official in modern pharmacopeias, and used it both for painting themselves and as an emetic for the sick.

However, the Indians were worse off than the colonists when it came to epidemics. An old English writer states, "They (Indians) were also considerable heretofore, about 3,000 men. . . . But they also were almost totally destroyed by the great sickness (plague) before mentioned, so that at this day they are not above 250 men besides women and children" (Blanton). The reason the Indians suffered was that they lived in much filth. They sometimes housed as many as nineteen persons in one tent. It is no small wonder, therefore, that they had great epidemics and sickness. Malaria was common among them because they drank water from stagnant pools in which the mosquito laid its eggs. On the other hand, the colonists did not suffer as much, because they did not walk among the natives during the epidemics. In all probability the epidemics were not contagious. It is more likely the colonists were cleaner, and kept themselves covered more, thus reducing the chances for mosquito bites and malaria. There is no doubt that the colonists received some valuable remedies, as well as some worthless ones, from the Indians. Sweating in tents was extensively employed by the Indians, and this practice was adopted by the colonists and their doctors; but its proper use was apparently not correctly understood. And disease, of course, also was not understood, and only scattered references to this phase are made by colonial writers.

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†A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

* Second award in an essay contest of The Colonial Dames, December 1, 1935.

† Major in basic medical sciences, Stanford University.

‡ Part I of this paper was printed in the August issue (on page 169).

MEASLES

Governor Winthrop's descriptions of diseases are brief, and therefore little is actually known about the prevailing sickness of the Colonial times in New England. However, a most prevalent disease at that time was measles, which was not limited to the Massachusetts colony, but was found also in the Carolinas, Virginia, and in the middle states. For, in Philadelphia, there was quarantine against measles as early as 1736, and perhaps earlier. New York also passed laws, in or about 1650, prohibiting the docking of ships that carried measles. Once, however, ships got into port without knowledge of the local authorities and as a result there soon appeared an epidemic. The careless attitude of the officials and people often made the work of these early physicians extremely difficult. They were forced to combat not only disease, but also the puritanic and straight-laced virtues of the God-fearing populace.

ON THE TEACHING OF ANATOMY

About 1763 there appeared a certain young man, named Dr. William Shippen, who tried to teach a few loyal followers something about human anatomy. It appears, however, that his teaching of anatomy was periled considerably by some Philadelphia citizens, who demanded that he stop disgracing God and nature by making autopsies on human beings. The good doctor took no heed of these protests, with the result that he was very nearly lynched. If he had not been protected by a friend he might not have continued his work and never have achieved the fame which later was his. The wrath of the people at times knew no bounds. When Cotton Mather and Dr. Zabdiel Boylston had completed their inoculation experiments, they were threatened and openly attacked. Sometimes the doctors had to make all their calls at night, and they always were on their guard against attacks. Doctor Shippen was forced to dig up graves in order to obtain subjects for his work on anatomy. Boylston secretly practiced inoculation experiments on his negro servants and immediate family.

INOCULATION EXPERIMENTS OF ZABDIEL BOYLSTON

Here it should be noted that Boylston was considerably ahead of the English physician, Edward Jenner, who is generally credited with having introduced vaccination for smallpox. Jenner makes no reference to Boylston or Mather in his paper entitled "Vaccination Against Smallpox," published in 1798, although he may have done so in his first paper, written in 1796, which was never published. Nevertheless, Boylston was later recognized for his work on vaccination in Jenner's country, for he was introduced to the Court and made a Fellow of the Royal Society. It is of further interest that Boylston was a cousin of Cotton Mather's, and it was Mather who suggested to Boylston to try vaccination for smallpox. Mather, in turn, got the idea while browsing through English literature, where he found that vaccination was practiced extensively in Turkey during the Crusades. Thus, it seems clear that the colonists and their physicians were not lacking in powers of actual observation and appreciation of significant phenomena for good health and protection of their people. In fact, they were more alert and progressive than were their colleagues abroad, who were more advantageously situated, but their rewards were pitifully small.

FINANCIAL REMUNERATIONS

It may be of interest to consider briefly the remuneration that these early doctors received for their professional services. The case of Dr. James Oliver, practitioner of "physic," is interesting in this connection. It seems that Doctor Oliver charged only modest sums for his medicines and visits. It is pathetic to find that the good doctor often had no money for making visits, for patients paid little or nothing. For instance, one J. Hancock paid Doctor Oliver, but the doctor received "no pounds, no shillings, and sixpence." Although Doctor Oliver often attended as many as twenty or thirty patients daily, and more during epidemics, he received the total sum of only seven pounds and two shillings, or something over $35, for all his work. Truly, the life of the colonial doctor was far from the proverbial bed of roses, and his practice was anything but lucrative. Perhaps some of the colonial doctors never received their just dues because of the unpalatable medicinal concoctions which they prescribed for their patients. In fact, these mixtures were often so revolting to take that the patients were forced to expectorate them and, therefore, no good came of them. The treatment seemed worse than the disease, and the patient recognized that he recovered without the doctor's medicine and thus denied the value of medical services. To make matters worse for the colonial doctors, there was the competition from midwives, who, in a way, were better appreciated because of their personal services.

INFLUENCE OF MIDWIVES

It may be reasonably doubted if midwives should be classed professionally with medical practitioners. However, by the middle of the seventeenth century they were regarded as being equally important and, therefore, they may be considered here. The other two classes of practitioners were physicians and surgeons. In any event, the midwives considerably affected the lives of the colonists and the work of the early physicians. During childbirth, no female patient was allowed to be attended by men. As a result, midwives were expected to take care of the mother as well as the child. Some of these midwives, among whom one of the most outstanding was Mrs. Ann Hutchinson, who founded a colony in Rhode Island, were highly proficient in this trade, and made it the sole business of their lives. The great class of midwives was built up and reigned supreme in obstetrics during the seventeenth and eighteenth centuries. Their extinction resulted only in the latter part of the eighteenth and the middle of the nineteenth centuries, when it was found that they often carried the germs of the dreaded puerperal fever. Undoubtedly their creed was, "let nature do the work." The result of this was that the proportion of children born dead in the Colonies was only a little less than the proportion of children that survived. Oftentimes the midwife was careless, the child was miscarried, and the mother died of puerperal fever. At times, of course, there were factors which could not be controlled or prevented. In one case in particular, when Mrs. Ann Hutchinson was acting as a midwife for a woman, the child born was a monstrosity, and Mrs. Hutchinson was required to appear before a Massachusetts court. She was charged with bewitching the child because she had muttered something before its birth. If she had not escaped to Connecticut, she would have been hanged. Similarly, in the early histories of Virginia, New York and New Jersey, midwives were often persecuted for something which they could not help or control. Again, the crude practices of these midwives make one wonder that the colonists survived as well as they did.

The important thing to note here is that the midwives, though often uneducated and generally untrained in the medical work they were doing, nevertheless played an important part in the lives of the colonists. They also constituted a fair percentage of the population, and were always in demand. So far as the colonists were concerned, the midwives were on the same plane as physicians and surgeons, despite their lack of learning. However, they contributed nothing real or lasting to medicine proper, except possibly their dangerous practices, which gradually caused the people to turn to the physicians. According to Mumford, one of the first male physicians to attend a woman during childbirth was a man from the Colonies. His name is not given by Mumford, but he points out that the physicians of these small settlements were wise enough to teach the people the importance of a physician taking care of the mother as a patient. In this respect, they were at least even with, if not somewhat ahead of, the doctors of the mother country. England had not yet entertained the thought of banishing midwives, but the colonists had dropped them as a class. Not only did the colonists lead in this regard, but also in the practice of medicine proper. They were discarding most of the ineffective remedies of the old formularies, and in their place were substituting more desirable and effective drugs.

COLONIAL FOUNDATIONS

A prominent American physician has said that the physicians of the continental colonies were among the leaders in medicine of the world during the seventeenth century, and it is not difficult to agree with him. There is much evidence of a real scientific interest among the colonial physicians, and, if it had been properly sustained, American medicine would have progressed faster and farther. As it happened, there was stagnation for more than seventy-five years after the colonists, and a domination by a spirit of commercialism until about forty years ago, when medicine in this country was again gripped by a scientific spirit which continues with increasing importance.

Looking back at those early times, it seems fair to conclude that by the time of the American Revolution, medicine in the continental colonies had a pretty fair foundation upon which could be laid the cornerstone of modern American medicine. We owe a great deal to these colonists and their physicians, who came here unprepared generally for diseases, many of which were new to them. Through their own ingenuity, and adaptations from various sources, they worked out methods for successfully combating and controlling the maladies. As already indicated, the colonists had to be more practical because they had few medical books or guides from England, and those that came were often out of date. The colonists, therefore, had to start by making first-hand observations on patients, and then, with the help of some Indian, old English concoctions, and of a few of their own, they gradually ruled out valueless cures and treatments. Many of these were, unquestionably, primitive. However, these and more may be legitimately excused, as well as praying over inveterate maladies attributed to demoniacal possession and other questionable methods, which today would cause amazement. These people may be excused, because they learned from first-hand experiences, by a sort of trial-and-error method. Of course, many times the patients got well because they had been helped by nature, rather than by the treatment. Be that as it may, the colonial physicians were conscientious, ever alert, practical men, who sought—and many times in vain—to save their friends, neighbors, and relatives from the clutches of death. They were humanitarians and more.

In reviewing the achievements of the seventeenth and early eighteenth centuries, there is to be found a long list of honored names, and a precious record written in private memoirs, in public charities, and in permanent contributions to medical science. Through their earnest endeavors, our predecessors, the colonial physicians, were among the leading, and in some things *the* leading, medical practitioners and investigators of these centuries. Because of the basic interests held by these old colonial practitioners, many of whom were also preachers, blacksmiths, and other tradesmen, American medicine has been built up to the highest degree of efficiency of all nations. It has become highly specialized to suit the needs of the many diseases now known, and of conditions which have developed with time. However, much of this is due to the firm and original foundations, especially the will for self-improvement, passed on to us by those old colonial practitioners.

The founding of the following important institutions and organizations in their time will bear witness to the colonists' great foresight and wisdom: The first hospital in Long Island (1663), College of William and Mary (1693), Yale College (1701), the Philadelphia Hospital (1721), the Medical Society of New York (1749), Columbia University (1756), University of Pennsylvania Medical School (1765), the first medical school in this country, Columbia Medical School (1768), Princeton College (1776), the first American pharmacopeia published by William Brown in Philadelphia (1778), Harvard College (1636) and Harvard Medical School (1782). In 1799 Congress passed the first quarantine act. Attempts at state regulation of medical practice were begun in New York in 1760, and in New Jersey in 1772; some kind of control also being exercised in Massachusetts and New Hampshire in 1781. In that early era of our country, that student of medicine and immortal surgeon, Dr. John Collins Warren, came into the world (1778), a man who will always be remembered for making, in 1846, the first completely painless surgical operation with ether anesthesia at the Massachusetts General Hospital.

Thus, everything considered, the continental colonists and their physicians were not only not lacking in appreciation of the great medical discoveries and developments in the Old World, but they actually began and made many of their own. They laid the foundations for great institutions and opportunities in this country, and these same institutions and influences have continued to expand and develop down to the present day. All this testifies to the remarkable wisdom and foresight of these colonists. Indeed they builded more and better than they realized. For today, American medicine leads all countries of the world in its high achievements, discoveries, and devotions to the public health and welfare. These colonial contributions in medicine† must be regarded as of the first order, for the seeds of some of them have given richly deserved harvests. They have affected institutions and teachings of medicine not only in this country, but throughout the world. Hence, it can be said truly that American colonial medicine made a real, substantial, and lasting contribution to all populations, in all countries, and for all time.

Conversational Gems of Dr. J. P. Widney*

Founder of the Los Angeles County Medical Association: At Age of Ninety-Five Still Active in Literary and Church Work

It is the getting, not the having, that makes the man.

The sickle is the test of the plow.

It takes a strong man to acknowledge his own weakness.

Our system of merchandising involves a great loss of time.

Do not make the postscript longer than the letter.

There can be no flour unless there is grist in the mill.

The people of the East are dreamers, but dreamers are dangerous when they wake up.

It takes brains to handle a pick and a shovel efficiently.

When you begin to repair an old house, open your purse and shut your eyes.

Thinking is the price of safety in our modern civilization.

Only the Infinite can comprehend the infinite.

Face-lifting is simply another name for pocket-lifting.

Men do not jump to success. It is the plodder that gets there. He was possessed by a great idea. A great idea is a great asset.

When you have a physician who begins to talk of calories and vitamins, run for your life. Eat what you want and you'll get well.

A discontented old age shows a life not satisfied with the harvest.

Civility is an asset that pays heavy returns.

Dignity is a good thing, but it does not do for a starving man to be so dignified he cannot eat without a napkin.

The piano is a machine. The organ has a soul in it.

The cello is the peace-maker among discords.

Brains can outwork brawn.

It takes brains to keep a face young.

The violin may be either angelical or diabolical.

When the thief has all he wants, he wishes everybody to turn honest.

The world is topsy-turvy climatically, financially, racially, socially, religiously (1934).

The world is bigger than the men who are trying to run it.

Selfishness cannot be concealed. It will crop out.

Do not spoil the sunshine of today by thinking of the clouds that may come tomorrow.

No man is strong enough to stand without friends.

The only real tenure of land is strength to hold it.

There is no juggling of funds in the books of the Recording Angel.

Good subordinates often do not make good principals.

It is the incompetent man that never wants advice.

The competent bookman is the man who knows not only the stores of his own land, but the bookstores of the world.

The man who cannot see greatness in others has no greatness in himself.

I can take a fifty-foot lot in the city and live in the country.

Never use a long word if a short word will express the thought.

Whenever you find a man who thinks he is the only honest man, do not indorse his note.

Life is a mirror. You see yourself wherever you go.

The piano is an instrument of percussion, ordinarily used for pounding time.

Of many a book I read the table of contents only.

Work is salvation. Idleness is destruction.

(To be continued)

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† References will appear in author's reprints.

* Compiled by Rebecca Davis Macartney.

Previous excerpts from the Macartney compilation were printed in the July issue (page 61), and August issue (page 171).

CLINICAL NOTES AND CASE REPORTS

A SELF-RELEASED LOCK-BOLT FOR FRACTURES OF THE FEMORAL NECK*

By E. W. Cleary, M.D.
and
Gordon M. Morrison, M.D.
San Francisco

A DEVICE which locks into the head fragment so firmly that the reduced fractured surfaces of the neck may be impacted securely and permanently together, is much to be desired.

One of the writers, Doctor Morrison, has invented a device which has proved so satisfactory that this preliminary report is in order.

This instrument is a hollow bolt of stainless steel, three and one-half inches long and one-quarter inch in diameter. The penetrating end has a slot three-quarters inch long and one-eighth inch wide, holding two levers hinged on a single cross-pin. While the bolt is being inserted, these locking levers lie completely within the slot. When the bolt is in place, the locking levers are pushed out by a threaded pin one-eighth inch in diameter, which traverses the hollow in the bolt to a position transverse to the long axis of the bolt. The protruding end of this pin has a knob by which it may be easily turned. The protruding end of the bolt is fitted with a loose-fitting nut. When the lock levers are out, and this nut is turned up tight against the cortex, the reduced surfaces are held so firmly together that no cast, splint or other external fixation appliance is necessary. The patient may be freely turned in bed, and may be

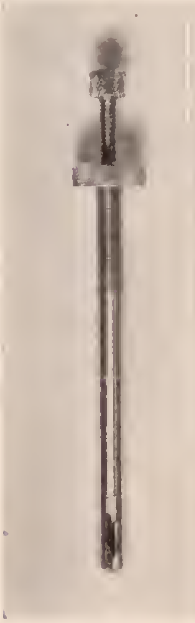

Fig. 1a

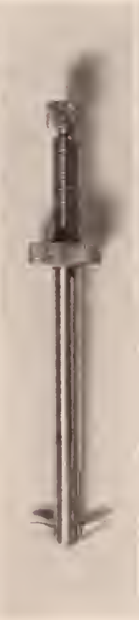

Fig. 1b

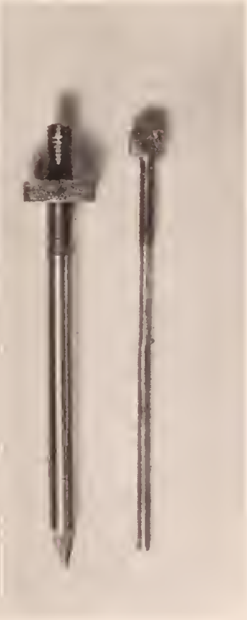

Fig. 1c

Fig. 1a.—Showing slotted end with levers folded within slot. Bolt is inserted in this position.

Fig. 1b.—Bolt with internal member screwed down, which forces levers out of shaft and locks them in a transverse position.

Fig. 1c.—Internal member has been withdrawn. The levers are folded over the end of the bolt, as in extraction of bolt.

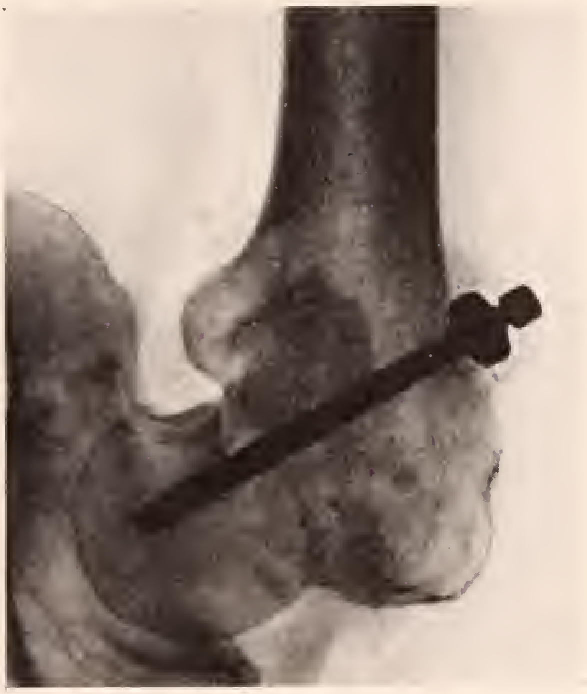

Fig. 2 (Case O. W.).—Bolt transfixing femoral neck. Transverse members are not seen, as they are in the A. P. plane.

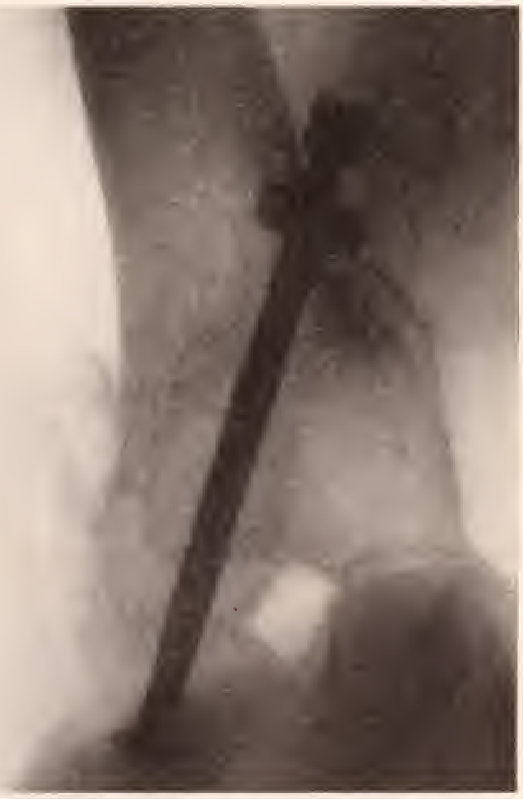

Fig. 3 (Case O. W.).—Lateral, showing bolt in femoral neck with levers in transverse position. (The apparent bending of the bolt is caused by the use of a curved cassette in taking this picture.)

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* From the Orthopedic Service of the San Mateo Community Hospital, San Mateo.

gotten up on crutches as soon as the wound has healed.

When the bolt is to be withdrawn, the center pin is unscrewed and the locking levers rotate back beyond the end of the bolt and flush with its surface, thus offering no possible obstacle to withdrawal.

Our procedure is to reduce the fracture under local anesthesia by Leadbetter's maneuver, check reduction by heel-palm test, and confirm by A-P and lateral x-rays. These are taken with four Michel clips, so placed in the skin about the hip that the clips and their shadows in the x-rays enable us to aim the one-quarter inch drill used to make way for the lock-bolt. We expose the trochanter for the drill under local anesthesia. X-rays check the position of the drill, which is withdrawn and the bolt immediately inserted. The bolt is locked and tightened as above described.

490 Post Street.
San Mateo Community Hospital.

DOUBLE UTERUS WITH FEATURES OF SPECIAL INTEREST

REPORT OF CASE

By Carl H. Talmage, M.D.
Sanitarium

The case of double uterus here reported represents failure of fusion of the Mullerian ducts from the pelvic outlet upward, associated with partial obstruction of the introitus. It is remarkable that the patient was not aware of any pelvic abnormality, though she had been married for eleven years.

Another feature is the development of fibromyomata in both uteri, with resultant pressure symptoms. The anatomical features are similar to the case reported by Dr. Joseph B. De Lee, except that bilateral fibromyoma were present instead of a pregnancy.

REPORT OF CASE

Mrs. F. H. R., white, age forty-three. The family history was irrelevant. The patient had the usual diseases of childhood, and has since had the following: alveolar abscess, renal calculus, aet. thirty-one. She had tonsillectomy and thyroidectomy.

Menstruation began at twelve. She had regular periods of three to five days' duration, with twenty-eight-day interval. The flow has become more profuse in recent years, without associated pain or headache. During the past year, menstruation is described as very profuse and followed by weakness and pallor.

She was married at the age of thirty-two. Due to fear of childbirth, and a desire to lead an active life outside her home, she had abstained entirely from sexual relations and, consequently, there have been no pregnancies.

Generalized abdominal pain, associated with distention and excessive amounts of gas, came on one month previous to admission. This was most severe two to five hours after meals, and also kept her awake at night. Fasting and the use of enemas gave a degree of relief, and she had fasted three days when she was admitted. There had been swelling of the ankles, which started at the age of sixteen, and this swelling was more marked in recent years. Recently she has slept with the foot of her bed elevated to reduce the swelling. Pain and stiffness of joints of fingers had been noted. Nocturia once had become a usual occurrence.

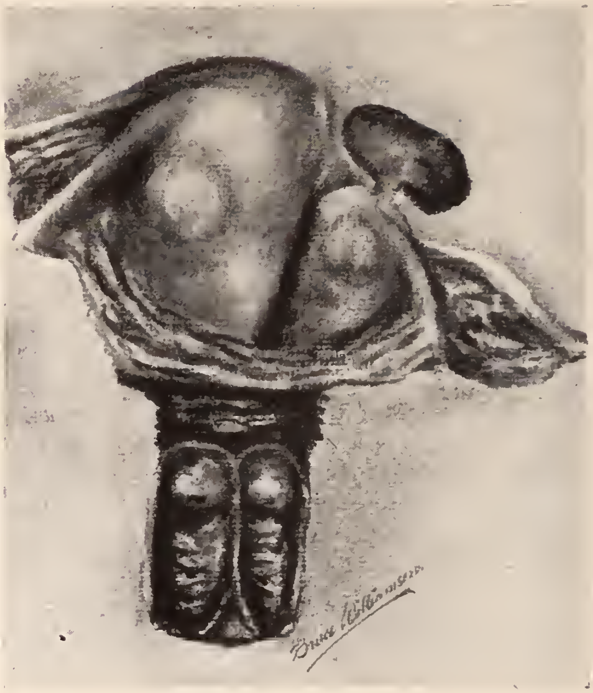

Fig. 1.—Diagrammatic drawing showing anatomic features and relationships.

Examination showed a pale but well-nourished white female. There is a transverse scar on the neck. The findings of the heart and lungs were essentially normal. Blood pressure was 130/75. Upper abdominal findings were normal, but there was hyperesthesia and resistance in the lower abdomen, which was more marked on the right. A mass seven centimeters across could be felt in the lower right quadrant. There was puffiness of the ankles. No swelling of the joints of fingers could be detected. Vaginal examination was unsuccessful, because the introitus was so small that one finger could not be introduced without pain. No other abnormality of the external genitalia was noted at this time. Bimanual examination was done with the finger in the rectum. A mass was outlined to the left which was interpreted to be the uterus displaced to that side. On the right was a larger mass, which was quite hard. There was no induration of tissues, but the masses palpated were firm and irregular. It was not determined whether the two masses were attached or separate.

Blood count was reported as follows: Hemoglobin, 50 per cent; red cells, 3,380,000; white cells, 5,800. The differential showed a lymphocytosis. The urine findings were normal.

Operation.—The patient entered the hospital August 12, 1935, and laparotomy was performed the following day. Midline incision above the pubis was made, and exploration revealed a large uterus lying in the right side of the pelvis. On the left another enlarged uterus with fibroid pedunculated from the fundus was found. The uteri were not united above the cervix, and a strip of peritoneum passed from the bladder to the cul-de-sac between them. Each uterus had one round ligament, and one fallopian tube with normal ovaries in relation to the tubes.

The procedure consisted of removal of the fibroid from the left uterus to improve exposure, followed by removal of that uterus, leaving the cervix *in situ*. The large uterus on the right was next removed, leaving the cervix. Fallopian tubes and ovaries were left in both sides. After careful ligation of uterine and ovarian vessels, the round ligaments were sutured into the stump of the cervix on each side, and the bladder fold of peritoneum was sutured over the raw areas. Appendectomy was done, after which the abdomen was closed by my usual technique. Permission to do plastic on the introitus had been denied, so it was not done at this time.

Permission was subsequently obtained, and on August 20 examination and plastic procedure were carried out. Two openings were found inside the labia minora, with a vertical septum between them. The opening on the right would admit the tip of the finger, but the left was smaller. The hymen was not ruptured. The openings were enlarged, and the septum was found to extend the entire length of the vagina, and a small virgin cervix was found at the apex of each vagina. The septum was severed between clamps, and sutures were placed to prevent bleeding.

The pathologist reported that the right uterus measured 11 x 12 x 9 centimeters and weighed 454 grams. The left uterus measured 7.5 x 7 x 5 centimeters and, together with the pedunculated fibromyoma, weighed 220 grams. The pedunculated fibromyoma measured 8 x 5.5 x 5 centimeters and weighed 94 grams. Numerous other fibromyoma were found in both uteri; the largest one measured eight centimeters in diameter.

The patient had an uneventful convalescence. Examination four months later revealed satisfactory healing. The vagina admitted two fingers and is of normal depth. Satisfactory coitus was reported. Blood count was near normal.

FUNDAMENTAL PRINCIPLES IN FRACTURE SURGERY

By H. W. Spiers, M.D.
Los Angeles

THE treatment of fractures in recent years has been assuming more and more the center of the surgical stage. The x-ray spotlight is focused on the fracture surgeon. The age of high-speed transportation for rich and poor alike is producing an ever-increasing number of serious fracture problems. It behooves even those who see these cases only occasionally to be prepared in the essentials of successful treatment.

There seem to be four fundamental principles in the treatment of all fractures. They are:

1. Reduce by traction and countertraction.
2. Place the distal fragment in line with the proximal fragment.
3. Immobilize until firm union takes place.
4. Immobilize the joints proximal and distal to the site of the fracture.

Proper consideration and coördination of these principles will, in the large majority of cases, keep the fracture surgeon on the high road to success.

Nature's invariable and involuntary response to bony structural damage is muscle spasm. It is nature's method of splinting the part. Overriding and malalignment is due to, in a large part, and maintained by, muscle spasm. There are several ways of overcoming muscle spasm:

(*a*) Anesthesia—general, spinal, block, or local.
(*b*) Temporary traction by hand, by traction tables, frames, and the like.
(*c*) Continuous traction—skin or skeletal.

To correct overriding of the fragments, traction and countertraction with, or without the assistance of anesthesia, would seem to be and is a mechanical necessity. The distal fragment must be pulled by the fixed proximal one until the normal length is restored.

The distal fragment should be placed in line with the proximal one. Proper alignment is mechanically essential if the part is to be restored functionally unimpaired. A study of fractures will soon convince one that the proximal fragment, attached to its fulcrum, is still a lever responsive to certain, though changed, muscle-pulls. In general, it assumes a fairly fixed position. The position of this fragment is not readily changed. On the other hand, the distal fragment is the free one in most instances. It is readily manipulated and aligned. Therefore, the second fundamental principle requires consideration in proper treatment. End-to-end apposition of fragments is not necessarily essential to a satisfactory functional or cosmetic result, but it is desirable. Alignment is essential. Variation from normal alignment of the shaft of a bone always means mechanically defective function. Malalignment of the crankshaft of your automobile means bearing trouble promptly. The same applies to the extremities or the trunk. This is particularly true of the lower weight-bearing extremity. This principle is being more and more evaluated in the care of fractures of the spine. Restore the normal curves, and normal function will be more surely restored.

The sequence of events that takes place in establishing bony union is quite definitely known. Disturbance of this sequence seems, to a degree, to be resented by nature. Injudicious mobilization of fractures during the early stages of union is, in too large a number of cases, responsible for the delayed and nonunions increasingly seen. The fracture site must be immobile until firm union takes place. The third fundamental principle requires careful consideration in the plan of treatment.

Fixation of the joints proximal and distal to the fracture site, in general, is a mechanical necessity. If one fragment is free to move, immobilization and alignment requirements are violated. Special instances, as Colles's fractures and the like, allow violation of this fourth fundamental. It is largely applicable in fixation by splints, braces, casts, and the like. Certain traction methods allow for function of one or both of the proximal and distal joints, but they must be considered a special and exceptional method, and thought of as such.

A word about the plan of treatment: To no small extent does the successful treatment of a fracture depend upon the plan as outlined at the beginning. In general there are many ways of handling each fracture problem. Certain serious fractures must be hospitalized. Some require recumbency. Others can be made ambulatory. Often a patient must be protected against himself, thus requiring "foolproof" care. The social, economic, and many other factors require consideration. Once a plan has been laid out, follow it through until its inadequacy has been proved. Often complications require a change, but with the change see that a new, well-thought-out plan is established.

In conclusion: It is well to think through each fracture problem and plan its treatment in accord with the fundamental principles in the care of all fractures if an ultimate high percentage of success is to be obtained.

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BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

SCARLET FEVER

I. ETIOLOGY AND DIAGNOSIS

E. B. Shaw, M.D. (384 Post Street, San Francisco).—*Etiology.*—Although the etiologic relationship of the hemolytic streptococcus to scarlet fever has been almost indisputably established, the problems entailed in diagnosis and treatment have thereby not been notably simplified. There are so many differences of opinion regarding the significance of bacteriologic and immunologic studies of the disease that it is a difficult matter for the clinician to apply with complete consistency all of these laboratory observations to the management of the disease.

A great many strains of the hemolytic streptococcus may be productive of the syndrome called scarlet fever. These strains vary widely in their biologic and immunologic characteristics, and the only property which they possess in common is their capacity to produce a soluble toxin capable of inciting the characteristic rash of the disease. This rash-producing toxin may best be identified by a skin test performed with a filtrate of a suitably prepared and diluted broth culture of the streptococcus isolated from infected patients. When this toxic filtrate is injected intracutaneously into susceptible human subjects, a characteristic skin reaction, the equivalent of the Dick test, is produced in twenty-two to twenty-six hours. To what extent this rash-producing toxin is responsible for all of the clinical manifestations of scarlet fever is at present uncertain, although there is reasonable evidence that many of these symptoms are incited by this toxin. Not only are different strains of streptococci concerned with the pathogenesis, but at least two distinct toxins have been identified in different cases of the disease.

No matter what importance we may ascribe to the soluble toxin in the pathogenesis, too close a parallel must not be drawn between scarlet fever and a disease such as diphtheria, which is due almost entirely to the activity of an exotoxin. The diphtheria bacillus behaves within the body almost purely as a saprophyte, exerting nearly all of its disease-producing activity by means of a soluble toxin. The hemolytic streptococcus, on the other hand, is capable of a far greater degree of parasitism than the diphtheria bacillus; and although certain effects are unquestionably due to its soluble exotoxin, it is able to produce a far greater degree of locally destructive and invasive activity. The diphtheria bacillus exerts little or no pathogenic activity upon a patient demonstrably immune to its soluble toxin, as shown by a negative Schick or Kellogg test. Innumerable clinical experiences, however, illustrate that a patient who is naturally immune, or has been immunized artificially or by means of active disease against the rash-producing toxin of the scarlet fever streptococcus (demonstrated by means of a negative Dick test) may be infected by streptococci acquired through scarlet fever exposure, the resultant disease often being no less severe in course, complications, and sequelae than scarlet fever, lacking only the diagnostically significant rash.

The attempt to apply bacteriologic information to the problem of diagnosis is equally difficult. The hemolytic streptococcus may be demonstrated in nearly every case of scarlet fever if cultural studies are carefully carried out, and it is possible, although impractical, to demonstrate that these cultures will produce the characteristic toxin. The persistent absence of hemolytic streptococci from the local infectious focus, which is usually the throat, in a patient suspected of having scarlet fever, has some weight against the diagnosis; but if one attempts to utilize positive cultures as evidence in favor of the diagnosis, he is immediately confronted with the fact that a great many patients, showing little evidence to support a clinical diagnosis of scarlet fever, will also yield cultures of hemolytic streptococci, which are indistinguishable from scarlet fever strains. Not infrequently, in institution or family epidemics, numerous patients will develop throat infections, among whom only a few may develop the rash and full-blown characteristics of scarlet fever; these latter will sometimes not be those most seriously ill. A positive diagnosis of scarlet fever can be made only on clinical evidences, and not on the basis of bacteriologic findings. The public health significance of positive bacteriologic findings during epidemics is obviously another matter, and is most difficult of satisfactory solution.

Diagnostic Features of Scarlet Fever.—The diagnostic features of typical scarlet fever scarcely need be enumerated. Most commonly the first symptoms appear within a very few days after exposure, when the patient develops signs of severe tonsillitis or pharyngitis. The absence of tonsils is far from complete protection against scarlet fever. The precise symptoms of onset are of little critical significance; there is slight to extreme elevation of temperature and pulse, accompanied by varying degrees of prostration. The original throat infection is often severe in character, there is much swelling, redness, and exudation of the local tissues. The rash usually appears within twenty-four hours, as a blush resembling sunburn, which rapidly spreads over the chest, abdomen, and back, being particularly marked on the lateral aspects of the body, and in the folds of the axilla and the groin. The rash may be most evanescent in character, but typically persists from four to seven days, becoming, meanwhile, somewhat more papular and elevated in character. The face, especially the circumoral region, is usually free from rash, and over the skin of the neck and of the extremities the rash is more scattered and somewhat more papular in character. Not uncommonly the papillae of the skin of the dorsal aspects of the distal phalanges of the fingers and between the eyebrows become distinctly prominent. During the next few days, changes in the coating of the tongue and enlargement of the lingual papillae characteristically produce at first the strawberry, and then the raspberry appearance. General lymphadenopathy commonly occurs. There is typically deepening of the pigmentation in the skin folds of the body, particularly at the bend of the elbow. Increase in fragility of the capillaries is readily demonstrable by the application of a tourniquet about the arm. The rash fades with varying degrees of rapidity, and is usually succeeded by some desquamation which begins in the groin and axillae and is most typical during the third week in those cases in which there is pronounced exfoliation of the skin of the fingers and toes. In many typical cases, desquamation is not marked or seemingly does not occur, and although typical desquamation is strongly positive evidence for the diagnosis, its absence is of little value as against the diagnosis.

The diagnosis of classical scarlet fever presents little difficulty, and seldom requires other than clinical evidences to establish. The disease differs from measles, German measles, and others of the exanthemata far more than it resembles them, and differentiation is of little practical difficulty. Drug reactions, particularly those due to arsenicals and the barbiturates, are sometimes productive of scarlatiniform eruptions which are best differentiated on the basis of history and the absence of evidences of local streptococcus infection.

The greatest diagnostic problem is presented by patients in whom the entire disease is very mild and with atypical rashes accompanying either mild or severe local infections. In these cases the diagnosis must rest almost entirely on clinical grounds, although the persistent absence of hemolytic streptococci in cultures is against the diagnosis. The physician should take care that his mistakes be made in the direction of safety, and should be prepared to make a positive diagnosis in the presence of only a few positive signs, never insisting that the clinical picture be present in its entirety. It is especially important that the diagnosis be made early, for at this time symptoms and signs will almost surely be more suggestive than later; moreover it is this stage at which communicability is greatest. In the presence of throat infections and a scarlatiniform rash, the burden of proof should be that the disease in question is *not* scarlet, and this diagnosis should be discarded only if a positive alternative diagnosis can be made.

Duke-Filatow's disease (Fourth disease) has been differentiated as a separate exanthem with many of the characteristics of scarlet fever, in which only a mild infectious course is observed. One should be most suspicious of the clinical criteria for this diagnosis; it should seldom (and I think never) be made, and is untenable unless hemolytic streptococci are consistently absent from cultures. Scarlatiniform eruptions accompany hemolytic streptococcus infections not only of the throat, but also those of the middle ear, of the accessory air passages (in which a curiously protracted "prodromal" stage and a virulent course are sometimes seen), of infected wounds anywhere in the body, of infected cutaneous burns, and of infections of the uterus after delivery. If one admits the etiologic connection between the hemolytic streptococcus and the eruption of scarlet fever, all of these cases should be regarded as scarlet and cared for with proper regard to isolation. It should be remembered, however, that there is a greater likelihood of dissemination of infected mouth and nasal secretions than of infected discharges from these other foci. It should be particularly borne in mind that following scarlet fever, purulent discharge from ears, nose, suppurating glands, or any other focus, are infectious as long as they may persist, and quarantine should be accordingly protracted. The causative organism may persist in the pharynx for a much longer period than the usual quarantine period of three weeks. As the local infection subsides, the opportunity for the dissemination of an infective dose of streptococci is greatly diminished and the present length of quarantine is, therefore, practically adequate. Certainly insistence on negative cultures prior to release from quarantine would prolong this period interminably in many cases, and seems unnecessary on the basis of clinical experience. If negative cultures were required for release it would raise the embarrassing problem of what should be done with the many healthy individuals who carry hemolytic streptococci in their throats, or with the many patients who have hemolytic streptococcus throat infections without other evidences of scarlet fever. It does seem desirable, however, that the physician exercise some control, with respect to the public health, over those patients known to have been exposed to scarlet fever who have developed throat infections without rash, although it is most difficult to maintain an absolute quarantine for these patients.

Certain skin reactions have been proposed as of practical aid in diagnosis. (1) Patients who have scarlet fever should have had a positive (susceptible) Dick reaction prior to attack, and during the early stages of the disease. The Dick reaction will usually become negative as the disease progresses to recovery. There is, however, considerable variation in this orderly sequence of events. The Dick reaction is more difficult of precise interpretation than the Schick reaction and, possibly for this reason alone, is distinctly less reliable. Clinically indisputable scarlet fever has been known to occur in those with previously negative Dick reactions. (2) The Schultz-Charlton reaction depends on the ability of convalescent serum or the serum of immunized horses, to neutralize the rash-producing toxin. Such a serum injected intracutaneously into a heavily erupted area during the early stage of the rash will produce a locally persistent area of blanching. This reaction has some diagnostic significance but is of little practical value, inasmuch as blanching is best produced in typical eruptions and is hardly demonstrable in scattered atypical rashes where it would be of critical value. The utility of this test is further complicated by the fact that in using an immune horse serum for the blanching reaction, a zone of erythema may be produced by the serum which will obscure the blanching; furthermore, unpleasant manifestations of serum disease may be produced by even this small dose of horse serum.

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II. SYMPTOMS AND PROGNOSIS

Albert G. Bower, M. D. (136 North Central Avenue, Glendale). — *Symptoms.* — This disease shows most variation in its manifestations of any of the common exanthemata. While usually occurring within two to four days after a single known contact, its incubation period is erroneously believed to be much longer, probably because non-immune persons incurring more or less constant exposure in quarantined households are often bebelieved to be incubating the disease before the actual infection finally results. However, the incubation period may at times be longer.

The disease must be classified clinically according to its symptoms if we are to have a clear understanding of its clinical, therapeutic, and public health aspects. It may be classified on a purely clinical basis into three types: ordinary or simple; septic or scarlatina anginosa; and toxic, malignant, or hemorrhagic scarlet fever. After the particular type is clinically established, it may again be roughly subdivided into mild, moderately severe, or severe. Naturally, in such a protean disease, there will arise at times an overlapping of symptoms that causes some difficulty in establishing a clean-cut differentiation concerning the classification of an individual case. Fortunately, this is not usually the case. In over a thousand cases observed in Southern California during the past year, it was rather easy to place over 95 per cent under the heading of simple. The septic case, while relatively rare, is next in number to the simple, while in this state, the toxic variety is very rare. The emphasis attached to classification is due to the fact that it furnishes the logical key to rational treatment. In few places in the temperate zone, is scarlatina as relatively mild as it is in California, and particularly in Southern California. Climate appears to exercise a moderating influence, as contrasted with other parts of the country with more vigorous changes in season.

Attention is invited to the danger, from a public health standpoint, of the very mild or abortive cases of the simple form, which are accompanied by the mildest of evanescent sore throats and ephemeral rashes in which a physician is rarely called, and which usually escape quarantine to spread the disease among susceptible contacts, who generally do not escape so lightly. With this exception, little will be said about the symptoms of the simple type. All physicians are familiar with the sudden prodromal invasion, the vomiting, the anorexia, the hot, dry skin, the smart rise in temperature, the malaise, the circumoral pallor with flushed cheek, the coated tongue, and the occasional headache, chill, or convulsion in smaller children. Cough is uncommon. The severity of these invasion symptoms may be used as a fairly accurate gauge as to the severity of the ensuing eruptive stage, which commonly follows in twenty-four hours. The rash usually occurs on the chest and spreads over the entire body within a day. It lasts from a few hours to a week or longer, but is usually fading rapidly at the end of three or four days. The rash on the palate and tonsils, and the strawberry or raspberry tongue usually complete the picture. The pulse is high and this persists until the rash fades. The fever averages 103 degrees. In the uncomplicated case the patient improves in well-being with the appearance of the rash. While commonly described as an erythema, with the exception of the face, a careful scrutiny of a typical scarlet fever rash discloses that early it consists of miliary punctate macules, which later become papular, vesiculate, and frequently pustulate. In the first phase the skin feels hot and velvety; later it affords a "goose flesh" sensation. Pastia's lines appear in the folds of the elbow. Skin tests are unreliable in establishing the diagnosis. A leukocytosis of 10,000 or more is usually present.

With the subsistence of the rash, the desquamative stage ensues about the eighth to the tenth day. It may be limited to a few branny scales at the ends of the digits and on the hands and soles, or less frequently may involve all of the epithelial structures of the body. It may last only a few days, or continue for two months, but averages two weeks. The treatment of this form of disease is entirely symptomatic and supportive.

In the septic variety, all symptoms are exaggerated. The patient is terribly sick, and septic from the onset. Fever is high, often ranging from 103 to 107, and is of the fluctuating septic type. Attention is early invited to the exceedingly severe throat symptoms with thick, leathery greyish streptococcus membranes, which may extend to the nares or down to the trachea, and may only be distinguished from diphtheria by smear and culture. This type of the disease is practically nonexistent in individuals who have had a tonsillectomy. All the various stages in the unsuccessfully treated cases persist longer and are more severe, provided the patient survive. The throat remains sore longer. The sinuses and middle ear are early involved. The glands swell rapidly, and may suppurate. Purulent discharge from the nose is common. Extension from the involved middle ear to cause mastoditis is not unusual. Albumin, casts, and red blood cells are commonly present in the urine. The course of this type is uninfluenced by scarlet fever antitoxin, but the result of adequate immunotransfusion from a compatible convalescent donor, or of intravenously administered pooled, convalescent scarlet fever, human serum, is often one of the most gratifying and spectacular sights one may be permitted to see.

The malignant or toxic variety is, fortunately, most uncommon with us. Onset is exceedingly severe, and is ushered in by convulsion and hyperpyrexia, or by sudden chill. The rash is hemorrhagic or purpuric in tendency. The nervous system is profoundly involved from the onset, and if the patient survive, there is a rapid tendency to enter the syndrome known as the typhoid state, with delirium, coma vigil, and carpholgia. Hematuria occurs early. The tendency to unusual throat, ear, and upper respiratory involvement is absent. The picture is one of overwhelming toxemia, and the treatment should include the use of properly administered antitoxin, the result of which is often as spectacular here, as it is disappointing in septic and simple types. In fact, in the simple type, the urticaria produced by use of antitoxin is usually as bad, or worse than the disease.

In the days of pre-aseptic surgery, scarlet fever originating from wounds was a well-recognized clinical entity. In observing several thousand cases, about the only survival of this type we have seen is that complicating septic abortion. In these cases, pooled convalescent serum and commercial strepcococcus antiserum have been of great benefit, the antitoxin disappointing.

Among the commoner complicating symptoms of scarlet fever, in general, may be mentioned those ascribed to nephritis, otitis media, and mastoiditis, severe cervical adenitis, sinusitis, arthritis, endocarditis, and occasionally sinus thrombosis, brain abscess, and chorea.

Prognosis.—The chances of recovery or death in this community vary with the type of the disease and with the severity of the type. All toxic cases present a bad prognosis, if not treated early. All septic cases of any severity present a guarded prognosis, because of the ear and sinus complications, as well as those of the kidney. The prognosis in the common type, except in its severest form, is usually very good, bad prognostic omens being due almost entirely to complications involving the ear, nose, or throat. During the past year, in over a thousand cases hospitalized the total death rate in all types was just under two per cent. Very high white counts, 50,000 or over, are of bad portent. In late years the death rate has tended to show a steady decline, being highest during the coldest weather. Scarlet fever, as commonly seen, is most dangerous in infants under one year, and the majority of deaths occur in children under six years. It is extremely fatal to the few old people who take it.

Among unfavorable factors may be listed: severe membranous sore throat, cutaneous or internal hemorrhage, nephritis, mastoiditis, and sinus thrombosis.

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III. TREATMENT

Edward J. Lamb, M.D. (1515 State Street, Santa Barbara.)—*Preventive Treatment.*—Hospitalization is no doubt the most reliable method to check the spread of this disease. Home care cannot be credited with the necessary technique to prevent its spread. In the home care of a scarlet fever patient, the nurse and attending physician should use as careful technique as possible; a gown should be worn in the sick room, the hands should be washed in 4 per cent lysol solution and rinsed in 50 per cent alcohol solution. Eating utensils should be segregated and boiled. Discharge from mouth, throat, etc., should be immediately burned. Quarantine should be instituted as long as there is any discharge from nose, throat, mastoid, or suppurating glands, since infection is not from desquamation, but rather from discharge.

Active Immunization.—Most hospitals are immunizing their staff of nurses and internes by an intramuscular injection of diluted toxin. Three injections are given one week apart. In private practice it is not commonly done, the reason being the reaction and the question of the length of the durability to the immunity.

Nursing Care. — As in any acute illness, the patient should be confined to bed in a well-ventilated room. The air should be fresh, but also warm to prevent chilling. Great care should be taken that the patient is at no time exposed to a draft. During the early stages of the disease no bathroom privileges should be allowed. The patient should be kept in bed as flat as possible for at least three weeks. Sponge-baths or cooling lotions, such as calamin lotion, may be applied to the skin for relief of itching.

The diet should be light and fruit juices should be forced. With small children disinclined to drink sufficient fluid, we have found that feeding plain milk chocolate not only adds to the caloric intake and sugar requirement, but also stimulates a thirst for fluids. Weak beef or chicken broth may also be given for precarious appetites. Personally, I feel that this amount of protein in the diet would not be an important factor in the incidence of nephritis. The bowels should be kept active by enemata or mild laxatives.

An ice collar is applied for an extremely red and sore throat. It has been our policy to give no mouth gargles for fear of inciting an otitis media. In case of profuse nasal discharge, continuous warm saline irrigations are most beneficial. Antipyretic medication is of benefit for elevated temperature. Codein may be given for restlessness.

The frequency and severity of serum reaction have limited the use of antitoxin to only those early cases showing a marked toxemia. When given, it is by the intramuscular route.

Scarlet fever convalescent serum may be used to great advantage without severe reaction. The dose is from 20 to 100 cubic centimeters of pooled serum given intravenously; the dose depending on the patient's age and the severity of the disease. This convalescent serum may be repeated daily if necessary. The results in toxic cases have been striking when this serum is given within the first day or two of the disease.

Regarding complications: The treatment of the patient should be with the point of view of preventing complications.

Inspection of the temperature and pulse record will reveal evidence of beginning complications such as otitis media, mastoiditis, adenitis, arthritis, and endocarditis.

Otitis media. Usually demands myringotomy, especially if there is any sign of bulging of the ear drum and an elevated temperature. Persistent purulent discharge from the canal warrants a roentgenogram study to detect the possibility of mastoid involvement.

Daily excursion of temperature from normal to five or six degrees above normal suggests the likelihood of a mastoiditis or sinus thrombosis. Caution should be taken of the possibility of bilateral mastoiditis or bilateral sinus thrombosis. The treatment, of course, is surgical in the hands of a competent surgeon.

Nephritis. A frequent complication, this may be apprehended by daily urinalysis. Nephritis may not occur until the second or third week. Kidney function tests and determination of biochemical values of the blood, as well as objective signs of edema will dictate the type of therapy. The usual non-salt diet, together with active cathartics and hot packs, will promote elimination and conserve kidney function.

Adenitis. In early stages, ice-bag or cold applications. Lugol's solution (Miii, b. i. d.) for five or six days seems to have an alterant effect. If fluctuation occurs, hot compresses, incision, and drainage are indicated.

Myocarditis. Stimulation may be necessary for a weak and rapid pulse. Strychnin, grain 1/200 to grain 1/100, or camphor in oil, is often found valuable.

Endocarditis and pericarditis. The patient should be kept at absolute rest in horizontal position, with ice-bag to precordia. Salicylates may be given by mouth.

Arthritis. Apply olei gaultheria and olive oil, equal parts, to joints and cover with cotton and flannel bandage. If heart is not depressed, salicylates should be given.

Malpractice: Ankylosis of Wrist Following Treatment of Infection.—A nurse, while attending a child afflicted with streptococcic infection of the throat, November 5, 1930, pricked the thumb on her right hand deeply with a pin. Infection of the thumb developed and the defendant, a physician, was consulted. The nurse was removed to a hospital and the hand placed in a hot saline solution to localize the infection, and hot wet compresses were applied. Later, incisions were made and gradual subsidence of swelling and a lowering of the temperature resulted. On November 22 and 23, however, the nurse's hand gave evidence of ankylosis and the defendant applied a banjo splint to put the hand in a position of functioning. A cast was applied around the splint and the forearm. Claiming that a resulting stiffness of her fingers and wrist was due to the defendant's negligent treatment, the nurse brought suit against him. The trial court gave a judgment for the plaintiff, and the defendant appealed to the Supreme Court.

There was a conflict in the evidence, said the Supreme Court, as to whether, in the application of the banjo splint, the defendant retroflexed the hand at an angle of about 90 degrees or at an angle of from 40 to 45 degrees. The plaintiff contended that the defendant had applied to the hand a splint holding the hand in an exaggerated reflexed position; the hand being drawn back at an angle of about 90 degrees, and that the cast was applied around the splint and the forearm so tightly that it interfered with the circulation and with proper drainage. The defendant and the physician who administered the anesthetic prior to the application of the splint testified that the hand was placed in the splint at an angle of from 40 to 45 degrees. Without passing on the evidence, the Supreme Court was compelled to reverse the judgment of the trial court because of the court's refusal to instruct the jury as follows:

> If under the evidence and these instructions you should find in favor of the plaintiff you can only allow her damages for so much of her disability as you believe from the evidence is due solely to the negligence of the defendant, and not for any disability that you may find was due to the infection.

Under the circumstances of the present case, said the court, since the defendant was not responsible or liable for the original injury, but liable only, if at all, for subsequent negligent treatment, those phases should have been carefully separated by instructions in order that the jury might not be allowed to award damages on mere speculation and conjecture.

The hospital record, continued the court, kept in the ordinary course of business was admissible in evidence as an exception to the hearsay rule where the particular entry in question was identified as having been made by a nurse who worked at the hospital and who attended the plaintiff, although the nurse had subsequently left the hospital and her present whereabouts could not be accounted for. An instruction given by the trial court that the jury was not bound by the testimony of expert witnesses was not violative of a constitutional prohibition against judges commenting on the evidence.

For the error committed, the judgment of the trial court was reversed and the cause remanded for a new trial. (*Murgatroyd* v. *Dudley* (Wash.), 50 P. (2d) 1025.) *Medicolegal Abstract, Journal of the American Medical Association.*

Do You Know About the Volta Bureau?—"We consulted several specialists, and all of them confirmed our fears, but none offered any solution of our problem." Thus the mother of a small deaf child wrote to the Volta Bureau. The sentence might be quoted verbatim from many letters written by parents of deaf or hard-of-hearing children, or by hard-of-hearing adults.

The knowledge that deafness is present and that it is incurable comes with the force of a major calamity. It is so crushing in its effect that something positive in the way of help must be offered immediately if the individual is not to spend desperate years in a bewildered effort to adjust himself. The parents of a deaf child must be told that the child can be taught to speak and can be successfully educated, and that this education may be begun at home immediately, even if the child is not more than two years old. The parents of a child whose hearing is only slightly impaired must be given advice as to his adjustment. The hard-of-hearing adult must be told about lip reading, about hearing aids, about social efforts in his behalf.

The Volta Bureau was established for the purpose of furnishing all this information to all who ask for it. Its services are free. Alexander Graham Bell, the son of a hard-of-hearing mother, the husband of a deaf wife, the lifelong friend of everyone handicapped by deafness, used the money received as a prize for inventing the telephone to found the Volta Bureau so that anyone confronting the problems of deafness might be assured of help. Advice is given as to schools and preschool training, lip-reading instruction, hearing aids, social contacts, psychologic difficulties. While the Volta Bureau is not equipped to do employment service, it gives information in regard to the fields of activity that are open to the deaf and the hard-of-hearing.

The *Volta Review*, a magazine for parents and teachers of the deaf and for the hard-of-hearing, is on the reading table of many physicians. Pamphlets dealing with all phases of deafness except medical problems are available to all who ask for them. Lists of such pamphlets and sample copies of the magazine will gladly be sent free of charge. The Volta Bureau is located at 1537 Thirty-fifth Street, N. W., Washington, D. C.

Anybody may have personality. All that is necessary is a quality or a defect sufficient to dominate the mental faculties, which exist in an uncommon form in juxtaposition to the common form of other individuals.—L. Laurent.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6. Articles listed under the caption, "This Month's Topics," have been contributed by the Association's Secretary.

CALIFORNIA MEDICAL ASSOCIATION

EDWARD M. PALLETTE..President
HOWARD MORROW..President-Elect
FREDERICK C. WARNSHUIS.............Secretary-Treasurer

THIS MONTH'S TOPICS

ASSOCIATION ACTIVITIES

1. *Fall Council Meeting.*
2. *Individual Effort Fails.*
3. *Doctor, Read Your Mail.*
4. *American Medical Association Fellow and Member.*
5. *Have You a Paper?*
6. *Narcotic Regulations.*
7. *Why Become a Member?*
8. *"Skeet Shooters," Attention!*
9. *Endowment Reserves.*
10. *Endorsements of Legislative Proposals.*

PUBLIC RELATIONS DEPARTMENT

1. *Political Activity.*
2. *Legislation—What of the Future?*
3. *Forestry Medical Corps.*
4. *Forestry Medical Service.*

* * *

ASSOCIATION ACTIVITIES

FALL COUNCIL MEETING

The fall Council meeting which, by by-law provision must be held in the southern part of the State, will convene in the building of the Los Angeles County Medical Association on Saturday and Sunday, September 26-27, 1936.

* * *

INDIVIDUAL EFFORT FAILS

Very few individuals produce to their full capacity by themselves. Fifty, thirty years ago, this statement could be controverted with little difficulty. Today it is an axiom. No matter what position we occupy or what vocation we follow—profession, business, industry, or what not—we are interdependent upon our fellows. The greater our lack of interdependence the greater will be our inability to produce to full capacity. Non-dependence limits our capacity, fetters progress, confines us to a very contracted circle and concludes life with few, if any, worthwhile achievements.

The thinking individual requires no citations to cause him to realize that in order to accomplish the most, the best, and to attain the highest goal, he must depend upon others and upon groups and units of associates engaged in like vocation or professional endeavor. The successful, accomplishing individual, will be found united with his fellow workers and by their help, in his dependency, aid him to attain and scale the higher heights that ever lie on before. That man reaches his maximum of productive capacity.

Physicians, prone to become lone individualists, many times fail to recognize that they could do better, go farther and record capacity producing results, if they would admit dependency and unite with the guild of their profession. Great would be his profit.

Turn back for a moment—the men who stand out in medicine's progress—N. S. Davis, Senn, Osler, Kelly, Halsted, Welch Billings, Vaughan—name any of yesteryear's leaders, and you will find them all engaged in the midst and dependent upon their associates as they assumed and discharged obligations and duties in the ranks and offices of organized medicine. The recognition they received would not have been acquired otherwise.

While it is not possible for all to attain a place in the world or national limelight as did they, the axiom holds true in state and county endeavor and accomplishment. One need to but turn to your own state and county archives for verification.

The point of this comment is, that you are dependent upon your county and state membership affiliation to forge ahead and produce to your fullest capacity. The degree, the manner in which you take unto yourself the assistance of that dependent affiliation, will determine your professional and personal success. Appraise, therefore, your membership and realize that without it you are but mediocre in your capacity to produce.

They who have ambitions, the desire to succeed, are not content with mediocrity. Your active county and state medical organization rôle places before you a ladder that will enable you to attain and hold a reputation for producing in full capacity.

* * *

DOCTOR, READ YOUR MAIL

The Council, some six months ago, sought to obtain the opinion and attitude of members upon two important pending questions. A questionnaire was sent out and with it was a postal card upon which questions were propounded for the member to answer. Replies were received from approximately 50 per cent of the members.

This month the mailman brought in two of these cards with mail date August 22—over six months after the questions had been submitted. Apparently these members, either just going or returning from vacations had "cleaned up" their mail and sent in their belated, now useless, answers. This leads to this comment—Doctor, Read Your Mail.

It is realized that most doctors' mail is loaded with many circulars, form letters, advertising material, and what not—much of which merits consignment to the waste basket. However, midst all such second- and third-class matter there is often some important mail—medical meeting announcements, notices of special clinical meetings, and postgraduate opportunities. Again, your mail will contain important announcements related to medical organizational work and a call for your advice and assistance. You, Doctor, are the personal loser if you miss these pieces in your mail.

It is recognized that you are busy, but that is no excuse for piling your mail unopened on your desk, window-sill, or in a drawer, to be sorted at some distant leisure moment. Such an attitude certainly will cause you to miss many an important statement and announcement.

No need of further comment. The closing suggestions are:

1. Doctor, read your mail *daily*.

2. If too busy, instruct your secretary, nurse, office girl, wife, son, or daughter to open your mail and call your attention to important items.

3. If someone else opens your mail, give implicit instruction that they are to place before you each day any and all announcements and communications, be it first- or second-class mail, from your county and state medical organizations.

Some important communications are going to be sent to you this fall. They will require your prompt attention. Therefore, Doctor, read your mail, or cause it to be read for you.

AMERICAN MEDICAL ASSOCIATION FELLOW AND MEMBER

There continues to be confusion as to the difference in these two classifications in our national organization.

Member.—By virtue of membership in a county and state medical organization the individual automatically becomes a member of the American Medical Association. This membership carries with it no privileges. A member cannot register or participate in any of the activities of the American Medical Association annual meeting.

Fellowship.—To become a Fellow the individual must be a member of his county and state organization. He must make *application* for fellowship. He pays annual dues of $7, for which he receives a weekly copy of the *Journal of the American Medical Association.* He is entitled to register at the annual meeting and participate in its activities.

Confusion: Many members subscribe and pay $7 a year for the *Journal of the American Medical Association.* For that reason he believes he is a Fellow. *He is not* because he has not filed an application for fellowship. He may become a Fellow by applying and have all the rights, including the official journal, for the same price he is now paying for his journal subscription. However, an application has to be made.

The new directory of the American Medical Association has just been issued. Fellows are indicated by a cross within a circle. Consult one of these directories in your local library or hospital. If you are a Fellow you will find this encircled cross following your name. If you are not recorded as being a Fellow, it is suggested that you write to the secretary of the American Medical Association for a fellowship application blank and make formal application.

If two or more Fellows occupy joint offices, one or more of them may, by the asking, receive one of the American Medical Association special journals in place of the official journal. By this arrangement, in place of receiving two or more weekly official journals the office will receive one official weekly journal and, in addition, one or more of the special journals, depending upon the number of Fellows sharing a common office.

Every member should be a Fellow of the American Medical Association. Are you?

* * *

HAVE YOU A PAPER?

County societies are resuming their meetings following a summer recess. We are often appealed to by program committees or county secretaries to suggest a speaker for their county meetings. In order that these appeals may be promptly answered, a register of available guest speakers, with their subjects, is being prepared.

Members who are willing to accept invitations to appear on the programs of neighboring county societies are invited to send in their names and titles of their papers to the State Secretary. May we have this coöperation?

* * *

NARCOTIC REGULATIONS

Through ignorance of the law, or inadvertently, reputable physicians may become violators. It is, therefore, desirable to direct attention from time to time to certain provisions in narcotic laws that must be observed at all times.

The outright sale of narcotics to addicts or the issuance of fraudulent or fictitious prescriptions constitute criminal acts.

Physicians licensed to issue narcotic prescriptions or to administer these drugs must keep a record for two years, giving name and address of the person, the date, the character and the quantity of the drug, the purpose for which it was given. Such record shall be open to enforcement inspectors.

Ambulatory treatment of narcotic addiction is prohibited.

All prescriptions must be written in their entirety by the physician. Prescriptions written by your secretary, nurse, or druggist, and then signed by the physician is a violation.

The telephoning of a narcotic prescription is banned by the act.

Do not prescribe a hypodermic syringe or needle without a definite pathology.

Physicians are urged to write to the Division of Narcotic Enforcement, State Building, San Francisco, for a copy of the state law in order that you may guard against failure to properly comply with the law. Federal regulations may be secured from the Internal Revenue Bureau, San Francisco.

Demands of practice are prone to make one forgetful or careless. Hence the foregoing reminder. Enforcement officers are charged with a duty. They have no discretion but to enforce the law. Physicians have no discretion but to observe the law.

* * *

WHY BECOME A MEMBER?

Our Association is very desirous of having every eligible physician in California affiliated as a member through the local county medical society. Officers of these constituent units have time-consuming official duties that frequently prevent them from contacting eligible nonmembers. There are eligible nonmembers willing to join, but they wait till they are invited to do so. There are others who would join if they were enlightened as to the benefits of membership and what this organization is doing in their behalf.

To extend an invitation and to point out the benefits of membership is the duty and obligation of every member who knows or contacts a nonmember. Your officers and Council request that you assume and discharge this obligation. To assist you in doing so, a few reasons are advanced for you to transmit to the nonmember to obtain his application.

Under present conditions, and under conditions that will probably arise, it is impossible for a physician to do himself justice unless he is an active member and takes an active part in organized movements.

The public is learning to look askance upon the physician who is not a member of his county medical society. They conclude that there must be something wrong with him. Nonmembers do not gain or hold community confidence.

Educational Benefits.—County, district, and state meetings, with scientific discussions and clinical presentations; regional postgraduate clinics; postgraduate courses at medical colleges; medical libraries; monthly copy of California and Western Medicine.

Legislation.—Representation in legislative councils and chambers that opposes untoward legislation and sponsors desirable legislation related to public health welfare. Opposition to pernicious initiatives that seek to impose impossible conditions upon physcians and seeks to obtain political and lay domination of medical practice and care.

Public Education.—Through lectures, institutes, press releases, and through contact and advisory services, sound public opinion is inspired in regard to all questions concerned with public and private health.

Committee Activities.—Through standing and special committees and the Council, public, professional, and personal interests are conserved and professional qualifications and standing are advanced.

Membership Dues.—State dues, $15 per year plus county dues that vary from $3 to $20 per year, except in Los Angeles and San Francisco counties. Note: Social club's dues range from $60 to $200 per year for the privilege of playing golf, bridge, athletics, and buying food and drinks. These benefits are not comparable to the personal benefits derived from medical organization membership.

These are but seven features and are a few reasons as to why an eligible physician should become a member. Members can enlarge upon industrial recognition, insurance companies' preferences, lower malpractice insurance rates, hospital staff appointments, and national benefits.

It is hoped that these comments will induce every member to determine to obtain membership applications from among his medical associates. Do so now and turn them in to your county secretary.

"SKEET SHOOTERS," ATTENTION!

The golf tournament, feature of annual meeting entertainment programs, will find a counter-attraction at our 1937 Del Monte session. "Skeet" members have come to the fore and are developing plans for a skeet shoot. Dr. Alfred L. Phillips has been designated as chairman and organizer.

Members interested are requested to write to Doctor Phillips, Farmers and Merchants Bank Building, Santa Cruz, and give him the information requested in the following letter:

July 21, 1936.

Dear Doctor Warnshuis:

In talking with members of the California Medical Association from all over the State, I find that there are many who enjoy trap or skeet shooting. It occurs to me that an organization of these members along similar lines as our golf organization might make an added attraction at our annual meetings.

In order to determine how much enthusiasm there is for this sport, I would suggest that notice of such a proposal be published in CALIFORNIA AND WESTERN MEDICINE with a questionnaire to be filled out by those interested. If the response warrants, a tournament can be arranged for the next annual meeting at Del Monte, at which time a more permanent organization could be started.

The necessary information could be obtained from answers to the following questions:

What gauge gun do you shoot?

Do you prefer skeet ( ) or trap ( ) shooting?

I would anticipate with much interest the response to this proposal.

(Signed) ALFRED L. PHILLIPS.

* * *

ENDOWMENT RESERVES

Colorado medical men have perfected and incorporated a subsidiary group for the purpose of receiving, holding and investing financial funds and using the income earnings for organizational purposes. This subsidiary organization is about the same and is possessed of like powers as the Trustees Of The California Medical Association. Colorado has, however, initiated an active campaign for contributions, and reports receipt of certain amounts of gifts and bequests. We congratulate the Colorado profession on its foresightedness and its success in completing their organization. Other states may well do likewise. As far as we know and have learned, Colorado, Califonia, and Michigan are the only states that have provided for the receiving, holding, and operation of an endowment reserve that will hold its principal intact in perpetuity.

In recent issues it has been suggested to our members that they give earnest consideration to contributing to our principal fund and to transmit their subscriptions to the state office. Up to the present no such bequests or contributions have been received. This further comment is being made for the purpose of stimulating endowments. Members have had time for consideration and determining what amount they can and will contribute. May we now have an expression of their conclusions? One hundred $500 contributions equals $50,000. One hundred $1,000 subscriptions equals $100,000. One hundred $2,000 subscriptions amounts to $200,000. Ten $5,000 bequests means $50,000, and five $10,000 bequests creates a like amount. The total would be $450,000. This sum would yield annually between $18,000 and $20,000 for enlarged organizational work and accomplishments. Members and the public would reap and profit thereby. May this Association obtain that response is fervently hoped for by all who are concerned with our future. Will *you* remit the amount you are able to contribute?

* * *

ENDORSEMENTS OF LEGISLATIVE PROPOSALS

To County Secretaries:

Candidates for the 1937 Legislature possibly will begin to draft bills which they propose to introduce in the legislature. Officers and members of county medical societies will be approached for expressions of opinion, comment, or endorsement of such legislative proposals.

Our Council and Legislative Committee urgently advises and requests that county societies and individual members *consistently* refrain from expressing opinions and thereby placing themselves on record, possibly to subsequent embarrassment and disadvantage.

All proposed legislation related to public health and medical sevices is carefully studied and reviewed by our Legislative and Public Policy Committee. Following such study, recommendations are made to our county societies and members.

In all legislative, health and medical matters, be guided by the recommendations of our Legislative Committees, which will be transmitted from our Association headquarters. In plain words: Do not endorse or comment upon any proposed legislation related to public health, medical care or services until you have obtained full information from Association headquarters and have ascertained its recommendations. Individual members are urged to conform to this advice and request.

By direction of Council's Executive Committee.

F. C. WARNSHUIS, *Secretary*.

Do You Know?

That autopsies were performed on the three assassinated Presidents of the United States?

Nonmembers pay higher premium rates for malpractice insurance protection than do members of county medical societies?

Consultation with irregular practitioners has been declared unethical by the Judicial Council of the American Medical Association.

X-ray films are the property of the radiologist.

If you endorse the driver's license of a minor you are liable for the damage that that driver occasions while driving an automobile.

That for twenty-five cents you can obtain a package containing recent articles on a given medical subject from the Packet Library, American Medical Association, 535 North Dearborn Street, Chicago. Just write in, stating subject, and packet will be sent to you, to be returned in one week.

A Line of Type

1. The practice of medicine is a journey, not a destination.
2. Favorite prescriptions tend toward careless prescribing.
3. Your Association membership certificate rates framing and display in your office.
4. Journal advertisers are your patrons deserving your patronage.
5. Constructive suggestions are welcomed by county and state officers.
6. Publicity hounds have little claim for recognition of their professional ability.
7. Develop a hobby in order to enjoy a fuller life.
8. Take time to tell the nonmember why he should apply for membership.
9. Cynicism, subtly employed, is often mistaken for argument.
10. Self-complacency receives a jolt from a look within.

The load of tomorrow added to that of yesterday, carried today, makes the strongest falter. Shut off the future as tightly as the past. No dreams, no visions, no delicious fantasies, no castles in the air, with which, as the old song so truly says, "Hearts are broken, heads are turned." To youth, we are told, belongs the future, but the wretched tomorrow that so plagues some of us has no certainty, except through today. Who can tell what a day may bring forth. Though its uncertainty is a proverb, a man may carry its secret in the hollow of his hand. Make a pilgrimage to Hades with Ulysses, draw the magic circle, perform the rites, and then ask Tiresias the question. I have had the answer from his own lips. The future is today—there is no tomorrow! The day of a man's salvation is *now*—the life of the present, of today, lived earnestly, intently, without a forward-looking thought, is the only insurance for the future.—Sir William Osler.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

Political Activity

The recent nominating conventions of our nation's two leading parties and the approaching national, state, and local elections in November should, we trust, cause every citizen to give some time and thought to party platforms, qualification of candidates, and matters which concern public health welfare and professional interests. Organized medicine does not seek to discourage partisanship on the part of its physician members. Organized medicine does not lend itself to political or candidate partiality. As an organization we do not unite as a unit with any particular party or party candidates. Let that be clearly understood.

In the political campaigns of this fall, matters which concern public health and physicians may become issues. It is upon these issues that organized medicine has an obligation and a right to become not only vocal, but politically active. Having ascertained a candidate's opinion and attitude upon these questions, organized medicine is justified in endorsing or opposing a candidate or candidates.

When as a unit we do endorse or oppose a candidate, the public, the party, and the candidate should be distinctly informed that the position assumed is not to be construed as carrying with it organized medicine's endorsement or opposition to any party or its platform. The position that is assumed is based solely upon a candidate's position in regard to public health or medical measures, and in the interest of public welfare. It is a non-partisan attitude.

Whatever benefits the medical profession also benefits the public. Politicians seemingly do not understand that in this as in all of our other public activities our main concern is public welfare. That in questions concerning public health and medical care, organized medicine is the only and most competent group capable of determining what is best for all citizens.

We cannot expect the public to accept what we advise as being right because we say so. Our reasons must be stated fully and clearly so that all may understand and be guided accordingly.

We have a right to ask candidates to declare themselves upon questions in which we have an interest. We have a duty to enlighten candidates as to the right attitude that should be assumed in regard to the questions of the campaign in which we have a vital interest. We repeat, it is our right and obligation to support or oppose a candidate when our judgment indicates the position we assume. In exercising that right and in discharging that obligation we are non-partisan.

* * *

Legislation—What of the Future?

The constitutional amendments and initiatives that will appear on the November ballot Number 24. Not a single one of them has any reference to the practice of medicine, public health, medical care or medical service. It is, therefore, not deemed advisable to print the entire twenty-four proposed initiatives, as they will be sent to each voter in the voters' handbook.

It will be noted that the proposal to admit part- and full-pay patients to county hospitals, the dog-pound regulation (antivivisection), and "cult" and health legislation all failed to qualify or seek a place on the ballot. Voters will not be called upon to pass on these questions.

This is very gratifying. We are disposed to believe that our public health education program is beginning to be productive and that an informed public perceives the pernicious objects of these proposals. The Hall of Medical Science at the San Diego Exposition, visited by over a million persons, press releases, lay talks, press items on scientific medicine, the functioning of the Public Health League, the educational activities of county societies, members taking time to inform their patients and friends as to medical practices and principles—all these and other measures undoubtedly are molding and directing sound public opinion in regard to public and private health. We repeat, an informed public will not be misled by the specious arguments of proponents for unsound practices. Educational measures are recording results.

The time has not come, will never come, when our Association and its county units can restrict an aggressive program of public health education. Our efforts must go on and on unceasingly. Our responsibility and obligation are fixed and permanently so. Public minds and opinions must be kept abreast of medical progress. The stormy days encountered in the past decade were mainly due to the fact that in our zeal to take unto ourselves the discoveries made by our science, we left the public far behind because we neglected to keep it abreast and informed as to our progress. Such a state of affairs cannot be permitted to reoccur.

In place of relaxing our efforts we are impelled to extend and increase them. That is our purpose. To that end, and for the purpose of enhancing present results, county societies and state and county committees are requested to direct a program that embraces:

(*a*) Series of public health meetings, sponsored by lay groups and addressed by speakers from our Speakers' Bureau.

(*b*) Local public health institutes.

(*c*) Furnishing legislators with dependable public health welfare information in order to obtain sound legislation.

(*d*) Extend individual understanding as to proved medical practices and the manner in which it does conserve welfare.

(*e*) Expose the unsound claims of uneducated individuals who seek to profit by means of their bizarre representations.

By these means we shall hasten the day when California will be rid of charlatanism and pseudo-disciples in the field of health welfare and medical care. To that end do we direct our efforts. For that purpose every member is called upon to participate in this feature of organizational activity.

* * *

Forestry Medical Corps

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
CALIFORNIA REGION

San Francisco, July 1, 1936.

California Medical Association,
Four Fifty Sutter Street,
San Francisco, California.

Dear Doctor Warnshuis:

Your letter of June 27, addressed to Mr. Show, is received.

I wish to express my appreciation to you and your associates for your splendid efforts in connection with the organization of the Forestry Medical Service of the California Medical Association.

It goes without saying that your organization should prove exceedingly invaluable in time of need and, while I trust that it will not be necessary to call upon your membership often, yet it is gratifying to know that you are ready if occasion demands.

A copy of this letter is being sent to Mr. Charles G. Dunwoody of the California State Chamber of Commerce for his information.

Very truly yours,
S. B. SHOW, *Regional Forester.*

760 Market Street.

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† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

Forestry Medical Service

Long ago Californians organized voluntary fire departments to answer the alarm at any hour, day or night. Long ago, too, they formed Vigilante Committees to poise the scales of justice when injustice cried out. Today, again Californians have seen a need and set up a voluntary organization to meet it. Ultimately, its possibilities know no end—in time or in space.

If your child gets burned you call the doctor. If the occupants of your car are injured you call the Health Department. If a major catastrophe (like an earthquake or a flood) strikes whole cities, what do cities do? If they do not have well-organized "Major Disaster Councils," they are apt to turn helplessly to a thousand-and-one arms of mercy that do their work as best they can in a welter of confusion. People die or suffer needlessly.

The Forestry Medical Service of the California Medical Association is an army of 485 knights of mercy, scattered over the state, mobilizable in an hour after the call goes out, ready to give their skill, their time, and their transportation costs, in aiding burned or injured fire-fighters in California forests. This is their prime object, but they—and the balance of the six thousand membership of the California Medical Association who are virtually reserves in the Forestry Medical Service—are ready at a signal to meet any public emergency.

The whole thing stems from an oldish idea cherished by Director Charles G. Dunwoody of the Conservation Department of the California State Chamber of Commerce, which has long aided and abetted the organization and manipulation of fire-fighting crews throughout the fire-hazard sections of the state. Last year, the problem was presented to the California Medical Association which, like the real service body it is, took it up wholeheartedly.

Almost immediately applications for membership in the voluntary medical corps began to pour in. Only doctors of highest professional standing and qualities of endurance were accepted. Last summer, their first in action, thousands of burned and injured fire-fighters were treated (at no cost to themselves or Government agencies) by these men who left their homes, brought their own instruments, paid their own transportation, and often underwent great discomfort, or even danger, to reach the suffering. During the great Malibu fire in Southern California, for example, 2,200 cases were treated.

The doctors are aided by a smaller group of lay helpers (also volunteers from the district) who act as stretcher-bearers and liaison officers, and by Red Cross nurses and ambulance units.

The whole is coördinated, like so much clockwork, from the twentieth floor of the Four Fifty Sutter Building, San Francisco, where the California Medical Association has its headquarters. Dr. Frederick C. Warnshuis, Association Secretary, is chief medical officer of the Service. Under him are six regional medical officers, under them are thirty-six county medical officers, and under them are the 485 Service members. If a call comes from a federal or state forest officer, the chief medical officer sends out some of his men. If the fire is a bad one he may need them all. If it is a very bad one he may need to contact the regional medical officer, who will send reinforcements from another county. In the event of a major catastrophe, medical and first aid would stream in from the whole state, if need be.

And because these doctors are not just fire-time heroes, they give winter instruction in first aid and first-aid equipment.

"To our knowledge," says Doctor Warnshuis, "the Forestry Medical Service of the California Medical Association is the first and only thing of the kind in any country or time. Other western states are planning to follow the lead."—From *Sunset Magazine.*

There is an idea abroad among moral people that they should make their neighbors good. One person I have to make good: myself. But my duty to my neighbor is much more nearly expressed by saying that I have to make him happy if I may.—Robert Louis Stevenson.

COMPONENT COUNTY MEDICAL SOCIETIES

VENTURA COUNTY

The May meeting of the Ventura County Medical Society was held at the Ventura County Country Club on Tuesday, the 9th.

Following dinner, Doctor Achenbach presented Dr. Mark Glaser of Los Angeles, who gave a paper on the *Differentiation of Psychoneurosis and Malingering.* He then showed two reels of films, illustrating these two types of cases.

Doctor Shore entertained us with pictures of his recent hunt for mountain lions.

Business Meeting.—It was voted as follows:

That the delegate be instructed to support the plan for hospital insurance which was approved by the Council of the California Medical Association at Coronado.

That the Society present $25 to the Public Health League of California.

One of the members was contacted by Mrs. Young, who is attempting to start a nurses' registry and physicians' exchange, and asked him to have the Society lend its official weight to the plan. Since it is a private enterprise, to be operated for profit, the members felt the Society should have no connection with the enterprise.

Doctor Coffey announced that Mr. Ben H. Read, speaker for the next meeting, would like to have the dentists present also. The following committee was appointed to invite the dentists: Doctors Rey of Oxnard, Drace of Ojai, Osborn of Fillmore, Gronhovd of Santa Paula, and Hendricks of Ventura.

* * *

The June meeting of the Ventura County Medical Society was held at the Ventura County Country Club, Saticoy, on Tuesday, the 9th.

This was a joint meeting of the dentists and physicians of Ventura County. There were thirty-four present. More interest was shown, in regard to legislative matters, than at any previous meeting.

Following dinner, Mr. Ben H. Read addressed the group upon the subject of *Legislation.*

The following members were appointed to the Legislative Committee by President Shore: Doctors Coffey of Ventura, Rey of Oxnard, Strong of Santa Paula, Osborn of Fillmore, and Drace of Ojai.

As the hour was late, the meeting was adjourned without holding the usual business meeting.

A. A. Morrison, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (32)

Alameda County.—Harry Abrons, Dudley P. Bell, James F. Brady, Malcolm B. Hadden, Morton S. Havemann, Kenneth B. Jenkins, Joseph H. Milliken, Daniel F. Sullivan.

Los Angeles County.—Harvey E. Billig, Jr., Sidney B. Brownsberger, Behle B. Burns, J. Harold Cantarow, George H. Douglass, G. R. Dunlevy, Basia Gingold, Arthur F. Hall, Jr., Frederick Kellogg, Barney M. Kully, Max A. Levine, Herbert V. Mellinger, Lyle A. Mourer, Dwight T. Randall, Clinton A. Roath, Jr., Julius R. Scholtz, Sidney G. Sonneland, Kenneth D. Wright.

Monterey County.—Rudolph O. Griess.

Placer County.—Daniel Louis Hirsch, Harold L. Karo.

Sacramento County.—Edgar C. Haag, Harry O. Lovell.

San Diego County.—James W. Callaway.

Transferred (3)

J. F. Neilson, from San Luis Obispo County to Ventura County.

C. C. Vardon, from Los Angeles County to Alameda County.

Clinton A. Wilson, from Santa Barbara County to Los Angeles County.

In Memoriam

Buskirk, William Henry. Died at Los Angeles, August 7, 1936, age 56. Graduate of the University of Michigan Medical School, Ann Arbor, 1904. Licensed in California in 1920. Doctor Buskirk was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Chase, Raymond E. Died at Glendale, July 14, 1936, age 58. Graduate of the University of Southern California School of Medicine, Los Angeles, 1901, and licensed in California the same year. Doctor Chase was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Dougherty, Edwin Everett. Died at Los Angeles, July 17, 1936, age 60. Graduate of the Indiana University School of Medicine, Bloomington, 1910. Licensed in California in 1914. Doctor Dougherty was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Hicks, John Robert. Died at Tulare, August 1, 1936, age 65. Graduate of the Central College of Physicians and Surgeons, Indianapolis, 1897. Licensed in California in 1914. Doctor Hicks was a member of the Tulare County Medical Society, the California Medical Association, and the American Medical Association.

THE WOMEN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION[†]

MRS. ANDREW J. THORNTON..............................President
MRS. ROBERT M. FURLONG..
....Editor and Chairman of Publicity

County Auxiliary Reports

Los Angeles County.—The final meeting of the Auxiliary year was held in the Association building on June 2, at which time our loyalty was somewhat divided in that we regretfully ushered out of office our past president, Mrs. John V. Barrow, and her group of directors, who have served for more than two years, while at the same time we eagerly welcomed our charming new president, Mrs. Clifford A. Wright, and her board, who will direct our affairs for the ensuing year. In Mrs. Barrow's farewell address, in which she outlined the various activities of the past year, she stressed the fact that while there had been progress, we had, in fact, only arrived upon the threshold of a great future and that the big opportunity lay before us. That the Auxiliary has felt it a great privilege to work under the inspired leadership of our president was evidenced by the applause at the conclusion of Mrs. Barrow's remarks, the whole assemblage standing in acknowledgment of their appreciation. Upon being installed as the newly elected president, Mrs. Wright presented her board: Mrs. Simon Jesberg, first vice-president; Mrs. E. M. Pallette, second vice-president; Mrs. Eric E. Larson, recording secretary; Mrs. J. F. Friesen, treasurer; Mesdames J. Martin Askey, W. H. Leake, Mark A. Glaser, F. B. Settle, A. T. Newcomb, and John P. Nuttall, directors. Mrs. James F. Percy, who attended the American Medical Association convention in Kansas City, gave a very newsy report of the women's activities there, announcing that Mrs. Philip Schuyler Doane had been honored by election to office as third vice-president of the National Woman's Auxiliary.

As a very lovely climax to our last program of the year, Mrs. Alfred Swan, artist and resident of China for fifteen years, made an old Chinese saying, "Carry a picture in your heart," a reality for each one as she portrayed the beauties of China, using her own paintings to illustrate her talk. Gowned in an exquisite Mandarin coat and surrounded by old Chinese embroideries, Mrs. Swan transported us into the land of crumbling architecture, yet enduring in spirit, because the Chinese believe only culture is worthy of preservation, and this they have done. "There are as many different stories told about China," said Mrs. Swan, "as there are people who have returned from there, and that is because they have different eyes; but I shall show you China through the eyes of a painter." She started her pictorial journey from Peking, unlike any other Chinese city, since it was built by Ghengis Kahn, a Mongol, who revered space, and therefore planned a city of wide thoroughfares and of spacious courtyards. The curved roof, so characteristic of Chinese architecture, derives its origin from the outline of the tent, the early home of these nomadic tribes, and this heritage led them to blend and harmonize their architecture rather than to dominate and to conquer nature, as is our habit. From North China we traveled southward, with Mrs. Swan's beautiful pictures guiding our way. We were left with an admiration for the Oriental, whose philosophy would inspire the lowliest peasant to place a tablet over the doorway of his mud hut, bearing the inscription, "The home of ten thousand joys."

A membership breakfast was held in the beautiful gardens of Mrs. William A. Swim, attended by 150 members and guests. At this time fifty new names were added to our list, thus making our county membership the largest in the United States.

Mrs. Harold E. Crowe, *Corresponding Secretary.*

* * *

Honoring Mrs. John Vincent Barrow and her retiring executive board, Mrs. Clifford Andrews Wright, newly elected president of the Woman's Auxiliary to the Los Angeles County Medical Association, will entertain at a garden tea today. Among honor guests will be Mesdames William A. Swim, Walter H. Boyd, Arthur J. Annis, H. E. Schiffbauer, W. O. Leach, Philip Stephens, C. D. Hubbard, Ray Miller, Franklin Farman, Mark A. Glaser, and Harold Crowe.

Hostesses assisting Mrs. Wright who are members of the new executive board are: Mesdames Simon Jesberg, Edward M. Pallette, Eric A. Larson, J. F. Friesen, John P. Nuttall, J. Martin Askey, W. H. Leake, F. B. Settle, A. T. Newcomb, and Robert L. Carroll.

Others are: Mesdames James F. Percy, Philip Schuyler Doane, Frank E. Detling, Samuel D. Ingham, W. H. Olds, Joseph Robinson, Lillian Bellah, A. Brockway, Peter McArthur, Irving R. Bancroft, and Ross Moore.—*Los Angeles Times,* June 30, 1936.

It is only rarely that a child is better than his home influence. He may be smarter than his parents or more successful or more beautiful, but his moral strength and his habits of life and his intellectual leanings will largely be those that he inherited and that he acquired or developed in his home. Since we cannot make the world over in a day, there is our point of beginning.

Begin to think of your child as the descendant of a thousand generations that have made on it an indelible mark of tendencies, instincts, passions, ambitions, habits and abilities or disabilities. This link in the long chain of your heredity is in the forge and on the anvil of home environment. It can be molded, shaped, strengthened, or it can be left weak and full of flaws. Are you going to make a stronger link in the long chain or a weaker one?—From "The Harvest of the Years," by Luther Burbank and Wilbur Hall.

[†] As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Robert M. Furlong, chairman of the Publicity and Publications Committee, Linden Lane, San Rafael. Brief reports of county auxiliary meetings will be welcomed by Mrs. Furlong and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Atlantic City, New Jersey, June 7-11, 1937. Olin West, M. D., 535 North Dearborn Street, Chicago, secretary.

California Medical Association, Del Monte, May 2-5, 1937. F. C. Warnshuis, M. D., 450 Sutter Street, San Francisco, secretary.

Nevado State Medical Association, Reno, September 25-26, 1936. Horace J. Brown, M. D., 20 North Virginia Street, Reno, secretary.

Rocky Mountain Tuberculosis Conference, Albuquerque, New Mexico, September 28-29, 1936. Arnold Minnig, M. D., 638 Metropolitan Building, Denver, Colorado, secretary.

Medical Broadcasts*

The American Medical Association broadcasts have been discountinued for the summer months. A new series is under consideration for the autumn and winter of 1936-1937.

San Francisco County Medical Society. — The radio broadcast program for the San Francisco County Medical Society for the month of September is as follows:

Tuesday, September 1—KYA, 6 p. m.
Tuesday, September 8—KYA, 6 p. m.
Tuesday, September 15—KYA, 6 p. m.
Tuesday, September 22—KYA, 6 p. m.
Tuesday, September 29—KYA, 6 p. m.

* * *

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of September is as follows:

Tuesday, September 1—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, September 5—KFI, 9 a. m. Subject: The Road of Health.
Saturday, September 5—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, September 8—KECA, 10:30 a. m. Subject: The Road to Health.
Saturday, September 12—KFI, 9 a. m. Subject: The Road of Health.
Saturday, September 12—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, September 15—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, September 19—KFI, 9 a. m. Subject: The Road of Health.
Saturday, September 19—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, September 22—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, September 26—KFI, 9 a. m. Subject: The Road of Health.
Saturday, September 26—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, September 29—KECA, 10:30 a. m. Subject: The Road of Health.

Recent Exhibits in the Crummer Medical History Room of the University of California Medical School. These exhibits have included a display of material relating to the development of modern dental practices and anesthesia. This was arranged for the meeting of the American Dental Association held in San Francisco the early part of July.

During the Sylvatic Plague Conference held at the University of California Medical School in June, there was a special exhibit of material relating to plague in California. In this exhibit, in addition to scientific publications, there were pamphlets and news items relating to the controversy as to whether plague actually existed.

Physicians at University of California Summer School for Research. — Three distinguished physicians have joined the pharmacy laboratories of the University of California Medical School for research work throughout the summer.

Dr. S. A. Peoples, fellow in the Maudsley Hospital of London, and noted psychiatrist, is making a study of depressants on the central nervous system, as is Dr. P. K. Knoefel, former National Research Council Fellow at the Medical School.

Dr. George Emerson, head of the department of pharmacy in the University of West Virginia, is engaging in laboratory work on the problems of anesthetic shock.

Doctor Peoples has just been appointed assistant professor of pharmacy in the University of Louisville, and will take up his duties there in the fall.

Salesmanship Is Vital to Public Health. — A physician or surgeon should go to school all of his active life in order to keep adequately informed on the latest procedures, and the University of California Medical School will do what it can within its resources to bring this about.

This is the first declaration of policy of Dr. Williams McKim Marriott, who has just taken over his duties as dean of the school, succeeding Dr. Langley Porter, retired.

Not only should the doctors be kept fully informed professionally, but "the Medical School has a job of salesmanship on its hands to fully acquaint the public with what it is doing," Doctor Marriott said.

"It is the province of the Medical School to provide advanced education, in so far as possible, through organized postgraduate work. Naturally, we would like to see the time when doctors will not have to go East or to Europe for further study. We would like to give them the same advantages right here at home. While I was in the Medical School of Washington University, St. Louis, I had many students from California, and I presume that this is true in other eastern centers. It would be a fine thing if we could keep them here instead."

Regarding public health salesmanship, any such program must be dictated by extreme caution and conservatism, "which should make it all the more effective," he said. The school should be civic-minded as well as health-minded, with fullest coöperation being extended to such organizations as chambers of commerce and service clubs, in driving home the message of good health and well-being.

While in St. Louis, Doctor Marriott was a member of the board of directors of the Convention and Publicity Bureau of the St. Louis Chamber of Commerce. He has taken a temporary home in San Francisco with Mrs. Marriott and their 12-year-old son, McKim Marriott.

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* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Rocky Mountain Tuberculosis Conference.—This year's session will be held at the Franciscan Hotel, Albuquerque, New Mexico, on September 28 and 29, 1936. Listed among the speakers are the following Californians, with their subjects:

When Should Artificial Pneumothorax Treatment Be Discontinued? by Munford Smith and Howard W. Bosworth of Barlow Sanatorium, Los Angeles.

Anesthesia to the Tuberculous, by Arthur E. Guedel, Professor of Anesthesiology, University of Southern California.

Tuberculosis in the Aged, by John W. Shuman, Associate Professor of Medicine, College of Medical Evangelists, Los Angeles.

Does Tuberculin Deserve a Place in the Therapy of Tuberculosis?—Thirty Years in Retrospect, by Harry C. Warren, California Sanatorium for the Treatment of Tuberculosis, Belmont.

For further information, address the secretary-treasurer, Arnold Minnig, M.D., 638 Metropolitan Building, Denver, Colorado.

New Payment Plans Outlined.—In an effort to help both the doctor and the patient, several new plans of payment have recently been announced by the Berkeley General Hospital. In order to avoid confusion in the minds of the profession, they are outlined below:

1. *Cash Payment in Advance.*—Traditional plan of collecting one week in advance.

2. *Patient's Installment Plan.*—The admission of responsible private patients with a small down payment and small weekly or monthly installment payments.

3. *Collection of Physicians' Fees.*—The extension of the installment plan to add doctor's professional fees to the patient's installment contract in any case where the doctor might feel that the hospital, because of the security behind its written agreement and its follow-up system, is in a better position to collect from the patient than he is. This medical credit service is entirely optional with the physician and is not taken up with the patient unless so requested by the physician.

4. *Part-Pay Medical and Dental Clinics.*—This plan is not open to private patients, but provides only for the care of deserving patients who, upon strict social service investigation, and with the consent of the last attending physician, have been found eligible for out-patient care or hospitalization by the clinic staff at reduced part-pay rates in small installment payments.

Interstate Postgraduate Association of North America.—The twenty-first International Assembly of the Interstate Postgraduate Medical Association of North America, under the presidency of Dr. David Riesman of Philadelphia, Pennsylvania, will be held in the public auditorium of St. Paul, Minnesota, October 12, 13, 14, 15, and 16, with preassembly clinics on Saturday, October 10, and postassembly clinics Saturday, October 17, in the hospitals of St. Paul.

The aim of the Program Committee, with Dr. George Crile as chairman, is to provide for the medical profession of North America an intensive postgraduate course covering the various branches of medical science. The program has been carefully arranged to meet the demands of the general practitioner, as well as the specialist. Extreme care has been given in the selection of the contributors and the subjects of their contributions.

In coöperation with the Minnesota State Medical Association, the Ramsey County Medical Society will be host to the Assembly and has arranged an excellent list of committees, who will function throughout the Assembly.

An invitation is extended to all members of the profession who are in good standing in their state or provincial societies to be present and enjoy the hospitality of the medical profession of St. Paul. A registration fee of $5 will admit each member of the medical profession in good standing to all the scientific and clinical sessions.

A list of the distinguished teachers and clinicians who will take part on the program will be sent on application to the managing director.

Special railroad rates will be in effect.

For further information write Dr. W. B. Peck, managing director, Freeport, Illinois.

County Hospital Head Retires.—Norman R. Martin, executive superintendent of the Los Angeles County General Hospital, retired from that post today.

Martin, who had served the county for two long periods since 1915, recently submitted his resignation to the Board of Supervisors because of ill health.

He joined the county service in 1915, when he was named superintendent of charities. At that time he supervised all relief work and had charge of the county hospital and the county farm.

In 1917 he was named executive superintendent of the county hospital, in addition to his duties as superintendent of the charity department. He held the two offices until 1923, when he retired to enter private business.

In 1931 he returned to county service again as executive superintendent of the new hospital, and supervised the occupancy of the new unit.

He won national prestige for his administrative work in the big institution. And today, as he retired, he received hundreds of tributes from fellow workers at the institution and many private citizens.—*Los Angeles Evening Herald and Express,* August 15, 1936.

Pacific Association of Railway Surgeons.—The thirty-fourth annual meeting was held at Reno, Nevada, September 4 and 5. Headquarters were at the Riverside. The program included the following papers:

Address of the president, Dr. D. H. Moulton.

Industrial Aspects of Lead, Arsenic, and Mercury; Carbon Tetrachlorid, Benzine, etc., Dr. Verne R. Mason of Los Angeles.

The Traumatic Faker, William Raines, Esq., of Los Angeles.

Fracture Symposium: The Newer Methods of Treatment.

Historical Notes on the Development of Orthopedic Surgery (illustrated), Dr. L. D. Prince of San Francisco.

The Important Rôle of the (1) Eye and (2) Ear Specialist in Industry, (1) Dr. R. A. Woodhull, Los Angeles; (2) Dr. H. B. Graham, San Francisco.

The Radical Repair of Hernias, with Fascial Sutures (Motion Picture), Dr. H. G. Holder of San Diego.

Chlorid Depletion: Its Surgical Significance, Doctors Curtis E. Smith and Alson R. Kilgore of San Francisco.

The Hazards of Hypertension, Dr. Philip King Brown of San Francisco.

Coffey-Humber Malignancy Research, Doctors W. B. Coffey, F. D. Humber; H. H. Beard, Professor of Biochemistry, Louisiana State University.

Late Lues in Railway Employees, Dr. John M. Graves of San Francisco.

Mussel Poison Ban Extended to Southern Counties. Like Mata Hari, the famous woman spy of war-time Paris, the phosphorescent sea glow-worm of the southern coast of California is beautiful but dangerous, for it is one cause of the much-feared shellfish poisoning.

For several years the State Board of Health has enforced a rigid quarantine on sea mussels from Monterey County north to the Oregon line during the summer months. This year, however, owing to the death of two Los Angeles residents who ate mussels gathered from a Ventura County beach, the ban has been extended south of Monterey Bay for the first time.

The Ventura outbreak marked the first time that toxic mussels had been discovered south of Monterey. Now investigations are being conducted as far south as the Mexican border to prevent new attacks of this deadly poison.

The source of shellfish poisoning was unknown for many years, during which it was claiming lives every season. Then the Hooper Foundation of the University of California, after exhaustive research, found that the mussels were made poisonous by the presence in the water of microscopic animal organisms, or protozoa, swept to the surface of the ocean by off-shore currents. Further study revealed that the glow-worms, which produce beautiful marine displays off the Southern California coast, are also a source of the paralytic poison which may cause death within two hours after eating infected shellfish.

American Board of Obstetrics and Gynecology.—The next written examination and review of case histories of Group B applicants by the American Board of Obstetrics and Gynecology will be held in various cities in the United States and Canada on Saturday, November 7, 1936.

Application blanks and booklets of information may be obtained from Dr. Paul Titus, secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania. Applications for this examination must be filed in the secretary's office sixty days prior to the scheduled date of examination.

A Newspaper Item of Interest to All Physicians and Surgeons Licensed in California.—The following article appeared in *Clinical Osteopathy*, Vol. 32, No. 1, p. 21, July, 1936. *Clinical Osteopathy* is published monthly by the California Osteopathic Association at 799 Kensington Road, Los Angeles. The excerpt follows:

CALIFORNIA DRUGLESS LICENTIATES MAY QUALIFY FOR PHYSICIANS AND SURGEONS

"At a meeting held June 29 to July 1 in Los Angeles, the California Board of Osteopathic Examiners adopted a resolution which opens the way for a number of drugless licentiates heretofore barred from obtaining a physician and surgeon certificate to obtain such certificate with a minimum of sacrifice of time from practice.

"Drugless licentiates who have completed the necessary premedical courses as prescribed by the State Medical Practice Act, and who comply with Section 10 of this Act, may now take a minimum of one trimester at the College of Osteopathic Physicians and Surgeons to qualify for the examination in additional subjects necessary to become eligible for a physician and surgeon certificate. These subjects are: biochemistry; advanced bacteriology and pathology; surgery; materia medica, pharmacology and therapeutics; general medicine, including clinical microscopy; advanced obstetrics and gynecology.

"This will be welcome news to drugless licentiates who have desired to obtain the physician and surgeon certificate, but have been unable to do so because of the unduly large sacrifice of time heretofore necessary to become qualified.

Public Health Administration in Sacramento.—Dr. Herbert F. True, City Health Officer of Sacramento, has issued the report of the Sacramento City Health Department for the year ending December 31, 1935. This report presents a careful and interesting account of the activities of an efficient municipal department of public health.

At a per capita cost of 78 cents, reduced to a net cost of 30 cents through revenues from fees, the people of Sacramento are provided with adequate safeguards to the health of the community. During 1935 no epidemics of food poisoning occurred in Sacramento, although many outbreaks occurred in various communities scattered throughout the state. Tuberculosis did not increase greatly in prevalence and, as a result of better housing and economic conditions, there was a marked lowering in the number of pneumonia cases. Rabies was kept under control, and Doctor True refers to the fact that the police dog is seen less frequently. Records show that the slashing, cutting injuries from this particular animal are of frequent occurrence. The infant mortality rate rose slightly and a limited outbreak of smallpox occurred. Diphtheria gained a considerable start in one school district, the health officer recording with regret 138 cases with four deaths. Doctor True believes that all of these cases and deaths were avoidable and makes the following comment: "Many parents who will give a child life insurance policy protection, and even fire protection against the loss of a home, neglect this health protection so vital to the little one." Scarlet fever and measles showed increases in prevalence, as was common throughout most of the cities and states.

The Sacramento City Department of Health is organized into twelve divisions—Administration, Public Health Nursing, Child Hygiene, Clinics, Dental Clinic, Emergency Hospital, Laboratories, Sanitation, Food and Market Inspection, Plumbing Inspection, Animal Welfare and Pound, and the Division of Cemeteries. It will be recognized that several of these activities are not ordinarily assigned to a department of public health, although some of the work done by each of such divisions may have a certain public health significance.

The department was entered for the fourth time in the United States Inter-Chamber Health Conservation Contest, advancing to sixth place from twentieth place in 1931, when the original entry was made.

In making a plea for private physicians to take part in the preventive portion of public health work, Doctor True makes the following quotation from an address by Dr. Howard Morrow, President of the California State Board of Public Health:

"Today many children die in the morning of life, and men and women die prematurely from diseases that are controllable or preventable by methods already available.

"These methods are not alone sanitation nor other impersonal procedures such as quarantine, food protection measures, etc., but include that most important need of a close coöperation between patient and physician.

"The full-time public health officer is in a most favorable position to lead in calling the attention of the public to the value of this close physician-patient relationship and to urge its establishment and continuance."

LETTERS

Concerning contribution of California Medical Association to Lane Library.

July 23, 1936.

Dr. Frederick C. Warnshuis
California Medical Association
450 Sutter Street
San Francisco, California

My dear Doctor Warnshuis:

Doctor Chandler sent me the check from the California Medical Association and I wish to thank you again for all your kindness to us. We appreciate the generous donation of the Association and are very grateful for the help they are giving us.

Very sincerely,
Louise Ophüls,
Librarian, Lane Medical Library.

Concerning California Medical Association contribution to Barlow Medical Library.

Los Angeles, July 22, 1936.

Frederick C. Warnshuis, M.D.
Secretary, California Medical Association
Four Fifty Sutter Street
San Francisco, California

My dear Doctor Warnshuis:

I take great pleasure, in behalf of the Barlow Medical Library, of accepting the check of the California Medical Association representing the per membership contribution to the Library.

Very sincerely,
E. Vincent Askey, *Secretary.*

Concerning placement of the Department of Professional and Vocational Standards of the State of California on the mailing list of California and Western Medicine.

Sacramento, August 6, 1936.

Dear Doctors: Answering your letter of July 23, 1936, advising me that you had placed my name upon the complimentary mailing list to receive your publication, I wish to express my thanks for your thoughtfulness. Being charged with a certain degree of supervision over the activities of medical groups, I am naturally interested in up-to-date editorial and Association news, and regard the action of the California Medical Association as furnishing me another source of information which will be both interesting and valuable.

Again thanking you, I am

Very truly yours,

William G. Bonelli, *Director.*

Concerning Federal (United States Public Health) regulations on psittacosis (interstate shipment of psittacine birds from California).*

Copy

United States Public Health Service

USPHS No. 0425—General (Psittacosis).
X 1950—California Bird Breeders' Association.

July 30, 1936.

Mr. Gilbert C. Lee, President Emeritus
Southern California Bird Breeders' Association
Room 200, 110 Center
Los Angeles, California.

Sir:—This office is in receipt of your letter of July 24, requesting, on behalf of the California Bird Breeders' Association, that Section 15½, Interstate Quarantine Regulations, governing the interstate transportation of psittacine birds, be rescinded.

With respect to your statement that no state other than California has complied with the law in regard to the laboratory examination of birds, your attention is invited to language of Section 15½ of the Interstate Quarantine Regulations relating to the certification of interstate shipments, which requires that inspections of bird-breeding establishments shall be supplemented by "such laboratory examinations of birds . . . as may be deemed necessary to enable the certifying authority to determine that the birds offered for shipment are free from psittacosis infection." While the Public Health Service has received no specific information which would indicate that the health authorities of states other than California are not making laboratory examinations of birds in connection with the certification of interstate shipments, it may be pointed out that the regulations do not *require* such examination in every instance, but leave to the discretion of the state health authority determination as to whether laboratory examination of birds may be necessary. It has been expected that each state health officer would be guided in this respect, to a considerable extent, but the history of the establishment in relation to the presence or absence of psittacosis infection in the past. In this connection it may be stated that within the past few years the only outbreaks of human psittacosis traceable to parrakeets shipped in interstate commerce were directly attributable to infected stock originating in California. There has been no evidence to indicate that the infection is present in any other state.

The Interstate Quarantine Regulations place upon the bird-breeding establishments and the transportation companies the responsibility of seeing that the requirement with respect to the age of birds that may be shipped in interstate commerce be observed. If you will furnish this office with the names and addresses of bird breeders and the names of the transportation companies who have violated the regulations by shipping or accepting for shipment birds under the age limit specified, I shall be very glad to initiate at once an investigation of this matter and to refer to the Department of Justice any violations of the regulations which can be proven.

I note your statement that Section 15½ of the Interstate Quarantine Regulations works great hardship upon bird breeders by virtue of the fact that the California Department of Public Health has taken 20 per cent of the birds of each breeder for laboratory examination. As this office has repeatedly pointed out to your Association, the promulgation of Section 15½ of the Interstate Quarantine Regulations, with the rigid requirements and activities of the California Department of Public Health directed toward cleaning up psittacosis in California, probably saved the bird-breeding industry in your state. At the time the latest amendment to the regulations was promulgated and the State Department of Public Health adopted its present procedure in connection with certification, a number of states were demanding that the Public Health Service set up an embargo against *all* interstate shipments of psittacine birds, and were considering the establishment of individual state embargoes against such shipments. It is my belief that if the bird breeders of California are wise they not only will refrain from complaining of the restrictions which have been placed upon the breeding and shipping of parrakeets and other psittacine birds, but accept the activity of the State Department of Public Health as being one of the most helpful things that could be done for the industry, and give their fullest coöperation in meeting the requirements which, after all, have been set up for the protection of the industry as well as the public. The Public Health Service has full confidence in the activities of the State Department of Public Health directed toward keeping infected birds out of interstate traffic. That the effort toward this end has been effective is indicated by the fact that no outbreak of human psittacosis has been reported outside of California since the State Department of Public Health adopted its new procedure. It is believed that the recent history of psittacosis in California and in other states where fatal outbreaks of the disease were directly traceable to infected birds from California fully warrant the procedure adopted by the State Department of Public Health in connection with the certification of interstate shipments.

While it is regrettable that psittacosis infection in aviaries in California has made it necessary to impose certain restrictions on interstate shipments for the protection of the public, and it is realized that the application of these restrictions has worked a hardship upon the bird breeders, one must not lose sight of the public's right to be protected from the hazard of illness and possible loss of life. I do not consider it advisable to recommend the rescinding of Section 15½ of the Interstate Quarantine Regulations at this time.

Very truly yours,

(Signed) Thomas Parran,
Surgeon-General.

cc: to Dr. W. M. Dickie,
Director, California State Board of Health.

Concerning "abortion racket."

Board of Medical Examiners
State of California

San Francisco, August 3, 1936.

To the Editor:—Referring to the clipping from the Los Angeles *Times* of July 27, 1936, commenting on what we term the Pacific Coast abortion racket, wherein is related that "Los Angeles politicians *has* guaranteed 'arrest protection' to the operators of illegal surgery clinics. . . . It is reported that at a price of several thousand dollars a month they had arranged to 'fix' not only police and officers of the State Medical Board, but members of the District Attorney's office as well."

This article strikes us as a smoke screen in an endeavor to discredit the Board of Medical Examiners.

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* References to articles in California and Western Medicine on the subject of psittacosis include:

States Ban Parrakeet Shipments, Vol. XL, No. 3 March, 1934, page 212, Miscellany.

U. S. Interstate Quarantine Regulations Amended, Vol. XL, No. 4, April, 1934, page 313. Filler.

Vol. XL, No. 4, April, 1934, advertising page 29. Filler.

Psittacosis, Vol. XL, No. 5, May, 1934, page 380. Editorial.

Psittacosis—James B. Luckie, Vol. 41, No. 2, August, 1934, page 98. Original article.

Psittacosis in Germany and Holland in 1935—Karl Meyer, Vol. 41, No. 2, August, 1934, page 133. Editorial Comment.

Psittacosis in California, Vol. 43, No. 4, October, 1935, page 253. Editorial.

Psittacosis—Arthur B. Steele, Vol. 43, No. 4, October, 1935, page 257. Original article.

Psittacosis in Australia—K. F. Meyer, Vol. 43, No. 4, October, 1935, page 260. Original article.

Psittacosis and Tularemia, Vol. 44, No. 2, February, 1936, page 79. Original article.

The so-called abortion racket of Pacific Coast magnitude has been under investigation by the Board of Medical Examiners, through its executive officer, for the past two years. We have communicated the facts to the District Attorneys' offices of the counties of Alameda, Los Angeles, and San Francisco.

The promoters became rather firmly entrenched. Offices have been maintained in Seattle, Portland, San Francisco, Oakland, San Jose, Los Angeles, Hollywood, and San Diego. The denouement came early in June this year in the form of a San Francisco grand jury indictment of some thirty-one individuals, said to be connected with this ring, whose names were printed in California and Western Medicine (News Items), July, 1936, page 112. Then followed a raid made by Assistant District Attorney McMahon of San Francisco County, accompanied by police officers of the San Francisco Homicide Squad, when office records, equipment, etc., were seized in San Francisco and Oakland. They then journeyed to Los Angeles, where, accompanied by a representative of the District Attorney's office, offices were raided, and within the past two weeks offices in San Diego have been raided.

Practically all of the indicted individuals have been arraigned in the San Francisco courts, and we understand the trial is set in the Superior Court of San Francisco for early in October.

Under date of July 13, 1936, the Los Angeles District Attorney advised that he had been informed the local police department intended within a week or two to submit evidence to the Los Angeles County grand jury.

It is a matter of common rumor that the asserted promoter of this ring has openly boasted of his "protection." Before the curtain finally falls we anticipate that his boasts will be proven false.

The latest rumor is that endeavors will be made by the defense to have continuances granted from time to time in hopes that when the trial is finally held important witnesses will have "disappeared."

In so far as the Board of Medical Examiners is concerned, rest assured that no "protection" can be obtained at any price by those engaged in violation of law. Our board, individually and collectively, has always endeavored to perpetuate those high ideals which have marked the ethical practice of medicine in America, as well as to enforce the provisions of the Medical Practice Act. True, we have occasionally found that the Board has been "sold out" by some unscrupulous employee, but as soon as the discovery is made, no time has been wasted in ousting such employee.

The interest of the Board of Medical Examiners will continue in the active prosecution of the so-called Pacific Coast abortion ring until its final determination in the courts. We have had most commendable support from District Attorney Matthew Brady and his assistant, Mr. McMahon, of San Francisco, which promises to result in the complete eradication of this organized racket.

Very truly yours,
C. B. Pinkham, M.D.,
Secretary-Treasurer.

* * *

SURGERY RING TO BE PROBED

Charges that a syndicate of Los Angeles politicians has guaranteed "arrest protection" to the operators of illegal surgery clinics are to be investigated next week by the county grand jury.

Plans for the jury inquiry were disclosed by police and District Attorney's aids when it was learned that a group of surgeons, asserted members of a state-wide illegal operation "ring," had undertaken to renew activities in Los Angeles after having been driven out of business several months ago.

Reopening offices in a downtown building, which they had hurriedly evacuated upon the threat of police raids, the surgeons boasted to prospective patients, it was reported, that, at a price of several thousand dollars a month, they had arranged to "fix" not only police and officials of the State Medical Board, but members of the District Attorney's office as well. — *Los Angeles Times*, July 27, 1936.

SPECIAL ARTICLES

THE AMERICAN BOARD OF INTERNAL MEDICINE, INC.

The American Board of Internal Medicine, Incorporated, February 28, 1936, completed its organization on June 15, 1936. The officers chosen were: Walter L. Bierring of Des Moines, chairman; Jonathan C. Meakins of Montreal, vice-chairman; and O. H. Perry Pepper of Philadelphia, secretary-treasurer. These officers, with the following six members, constitute the present membership of the Board: David P. Barr of St. Louis, Reginald Fitz of Boston, Ernest E. Irons of Chicago, William S. Middleton of Madison, John H. Musser of New Orleans, and G. Gill Richards of Salt Lake City.

The term of office of each member will be three years, and no member can serve more than two consecutive three-year terms.

The organization of the Board is the result of effective effort on the part of the American College of Physicians in conjunction with the Section on Practice of Medicine of the American Medical Association, and these two organizations are represented in the membership of the Board on a five to four ratio, respectively.

The American Board of Internal Medicine had previously received the official approval of the two bodies fostering its organization, as well as that of the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association.

The purpose of the Board will be the certification of specialists in the field of internal medicine, and the establishment of qualifications with the required examination procedure for such certification.

While the Board is at present chiefly concerned with the qualification and procedure for certification in the general field of internal medicine, it is intended to inaugurate immediately after July 1, 1937, similar qualification and procedure for additional certification in certain of the more restricted and specialized branches of internal medicine, as gastro-enterology, cardiology, metabolic diseases, tuberculosis, allergic diseases, etc. Such special certification will be considered only for candidates who have passed at least the written examination required for certification in general internal medicine. The operation of such a plan will require the active participation and coöperation of recognized representatives from each of such special fields of medicine.

Each applicant for admission to the examination in internal medicine will be required to meet the following standards:

General Qualifications

1. Satisfactory moral and ethical standing in the profession.

2. Membership in the American Medical Association or, by courtesy, membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association. Except as here provided, membership in other societies will not be required.

Professional Standing

1. Graduation from a medical school of the United States or Canada recognized by the Council on Medical Education and Hospitals of the American Medical Association.

2. Completion of an internship of not less than one year in a hospital approved by the same council.

3. In the case of an applicant whose training has been received outside of the United States and Canada, his credentials must be satisfactory to the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association.

Special Training

1. Five years must elapse after completion of a year's internship in a hospital approved for interne training before the candidate is eligible for examination.

2. Three years of this period must be devoted to special training in internal medicine. This requirement should include a period of at least several months of graduate work under proper supervision in anatomy, physiology, biochemistry, pathology, bacteriology, or pharmacology, particularly as related to the practice of internal medicine.

This work may be carried on in any domestic or foreign medical school or laboratory recognized by the Council on Medical Education and Hospitals of the American Medical Association as offering appropriate facilities for this type of postgraduate experience; or it may include a period of at least several months of graduate work under proper supervision in internal medicine or in its restricted and specialized branches in any domestic or foreign hospital, clinic, or dispensary, recognized by the above Council as offering appropriate facilities for this type of postgraduate experience.

3. A period of not less than two years of special practice in the field of internal medicine or in its more restricted and specialized branches.

The American Board of Internal Medicine does not propose to establish fixed rules for the preliminary training of candidates for certification in this field. Broad general principles for training, however, may be outlined, although such suggestions as are made must, of necessity, be subject to constant changes reflecting the dynamic nature of the specialty.

A sound knowledge of physiology, biochemistry, pharmacology, anatomy, bacteriology, and pathology, in so far as they apply to disease, is regarded as essential for continued progress of the individual who practices internal medicine. The mere factual knowledge of medicine and its basic sciences is not sufficient. The candidate must have had training in their use in furthering his understanding of clinical medicine. This implies practical experience under the guidance of older men who bring to their clinical problems ripe knowledge and critical judgment. Preparation to meet this requirement adequately may be even more difficult to obtain than the so-called scientific training. It may, however, be acquired in the following ways:

(*a*) By work in a well-organized hospital outdoor clinic conducted by competent physicians.

(*b*) By a prolonged period of resident hospital appointments likewise directed by skilled physicians.

(*c*) By a period of training in intimate association with a well-trained and critical physician who takes the trouble to teach and guide his assistant rather than to require him only to carry out the minor drudgery of a busy practice.

4. The Board does not consider it to the best interests of internal medicine in this country that rigid rules as to where or how the training outlined above is to be obtained. Medical teaching and knowledge are international. The opportunities of all prospective candidates are not the same. Some may have the opportunity of widening their knowledge by a period of study abroad. Others, at the other extreme, may be restricted to a comparatively narrow geographic area and their detailed training must be obtained in short periods scattered over a long time. Although it is laid down that at least five years must elapse between the termination of the first interne year and the time when the candidate is eligible to take the examination, a longer period is advisable. The Board wishes to emphasize that the time and training are but means to the end of acquiring a broadness and depth of knowledge of internal medicine which the candidate must demonstrate to the Board in order to justify it in certifying that he is competent to practice internal medicine as a specialty. The responsibility of acquiring the knowledge as best he may rests with the candidate, while the responsibility of maintaining the standard of knowledge required for certification devolves on the Board.

Method of Examination

The examination required of candidates for certification as specialists in internal medicine will comprise: Part I (written) and Part II (practical or clinical).

Part I: The written examination is to be held simultaneously in different sections of the United States and Canada, and will include: (*a*) Questions in applied physiology, physiological chemistry, pathology, pharmacology, and the cultural aspects of medicine. (*b*) Questions in general internal medicine.

The first written examination will be held in December, 1936, and candidates successful in this written test will be eligible for the first practical or clinical examination which will be conducted by members of the Board near the time for the annual session of the American College of Physicians at St. Louis in April, 1937. The second practical examination will be held at Philadelphia near the time of the annual session of the American Medical Association in Atlantic City in June, 1937.

The fee for examination is $40, which must accompany the application, and an additional fee of $10 is required when the certificate is issued.

Application blanks and further information can be obtained by addressing the office of the chairman, Walter L. Bierring, M.D., 406 Sixth Avenue, Des Moines, Iowa.

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

Report to Governor's Council

A monthly report of the California State Board of Health presents a survey of the major activities of the department during the preceding thirty days. Members of the California Medical Association who wish to orient themselves concerning the nature and scope of the State Health Department's work can do so by perusing the July 27, 1936, report submitted to Governor Frank F. Merriam's Council by Dr. W. M. Dickie, Director of Public Health. The present members of the California State Board of Public Health are: President Howard Morrow of San Francisco, Vice-President Edward M. Pallette of Los Angeles, George H. Kress of Los Angeles, William R. P. Clark of San Francisco, Gifford L. Sobey of Paso Robles, Gustave Wilson of Sacramento, and Walter M. Dickie of Sacramento, executive officer. The report follows:

BUREAU OF ADMINISTRATION

Activities of the Director.—The director spent the entire month of June in the northern part of the State. Conferences were held in San Francisco relative to prosecutions under the Pure Drugs Act; the development of nursing courses in training schools; the enforcement of wine standards; the regulation of the packing of dog foods; the development of a crippled-child program under Social Security; the development of full-time county health units; regulations pertaining to the packing of fish and fish products; organization of courses in the Western School of Public Health; the enforcement of regulations for the control of custard fillings in bakery goods; the enforcement of standards for jams and jellies; a proposed research study into dysenteries and diarrheas in California; and many other subjects including those pertaining to interdepartmental matters.

Among those officials from outside of the State who conferred with the director during the month of June were the following. . . . (Names deleted to conserve space.)

BUREAU OF EPIDEMIOLOGY

Food Poisoning.—At this season of the year, outbreaks of food poisoning occur commonly. Most of these outbreaks are of bacterial origin and are due to exposure to contamination and to holding at temperatures favorable to the growth of bacteria. Several such outbreaks were investigated during the month of June. One of them involved eclairs purchased from a bakery, laboratory examinations of which revealed a heavy contamination with staphylococci, the ordinary pus germ. Nineteen cases were involved in this outbreak, and the proprietor of the bakery involved was given instructions in the prevention of similar contaminations of this food product. Another outbreak involved a students' camp which housed 190 persons. No particular food product, however, was incriminated. It is important at this season of the year that all food products, particularly those containing cream-custard fillings, should be manufactured under the cleanest of conditions, and unless they are eaten immediately after their manufacture they should be stored at low temperatures.

Septic Sore Throat.—An outbreak of septic sore throat, scarlet fever, and diphtheria in an orphans' home was investigated. There were twenty-one cases of septic sore throat, six cases of scarlet fever, with four suspects, two cases of diphtheria, and six carriers. Milk was produced from the home herd, under filthy conditions, and one of the milkers had suffered from sore throat before the epidemic started. Instructions for the production of a better milk supply were given.

Typhoid Fever.—Outbreaks of typhoid fever were investigated in three different sections of the State. Two of them involved drinking water. One of these found its source in raw river water containing sewage, and the other came from a well located close to a dilapidated privy. The third outbreak involved an infected milk supply.

Typhus Fever.—A father and son living near the Mexican boundary developed chills and fever followed by an eruption, the cases developing into typical typhus fever. It is possible that the disease was transmitted by rat fleas. Typhus fever is endemic in Mexico, where it has prevailed over a long period of years. It runs a long and uncomfortable course. Fortunately, it is not of frequent occurrence in California, but isolated outbreaks occur occasionally.

Other Investigations. — Among other investigations undertaken during June were those involving infectious mononucleosis, leprosy, coccidioidal granuloma, suspected smallpox, tularemia, and plague.

General Health Conditions.—Measles, chickenpox, and German measles decreased in prevalence during June. The statistics for influenza indicate an increase. This is more apparent than real, however, as the figures represent cases that occurred earlier in the year, but which were not reported promptly. Epidemic poliomyelitis (infantile paralysis) continues at a normal level and shows no indication of increased prevalence at this time.

BUREAU OF FOOD AND DRUG INSPECTION

Imported Eggs.—Forty-six cases of imported egg products were inspected during June, and fees for the same were collected as provided in the law. A complaint charging the use of imported eggs without proper labeling was dismissed in a San Diego justice court upon recommendation of the District Attorney's office, because of the firms' willingness to comply with the law at all future times.

Egg Noodles.—Inspections were made of alleged egg noodles shipped into California from the Hawaiian Islands. Laboratory investigations disclosed that the product contained no eggs, but was artificially colored with coal-tar dye. The shipment of 3,500 pounds was quarantined.

Used Containers.—A survey of used containers, both glassware and cooperage, was continued during June. Special attenton was given to pickle manufacturers who use second-hand barrels. Coopers, in general, have indicated a willingness to coöperate in keeping containers unsuitable for food products from reaching the hands of the food packers. Second-hand bottle-washing places were inspected and warnings given with reference to the use of trade-marked bottles.

Drug Inspections. — Samples of hair tonics, laxatives, and a wide variety of so-called homeopathic remedies were inspected. Various so-called health institutions were investigated, and one was cited to appear to show why prosecutions should not follow for the advertising of certain remedies and treatment prohibited under the Statutes of 1919.

Wine Inspections.—Approximately seventy-five official samples of wines were submitted to the laboratory during June. Difficulties were encountered with owners of small wineries, as their cellars are not equipped to care for wine properly. Several actions against wineries are pending, many of whose products are mislabeled. Upon receipt of laboratory findings of substandard wine, the Attorney-General's office prepares the libel order, which is handled through the Superior Court, and at the same time an order is issued to show cause why the questionable material should not be destroyed or other disposition made.

Other Inspections.—Other inspections carried on during June covered canned goods, dog, food, lima beans, alimentary paste, "chicken turnovers," dried fruit, jams, and jellies.

Food Materials Destroyed. — During June more than 40,000 gallons of red wine and claret were destroyed because they were substandard and unfit for human consumption. Almost 1,000 sacks of onions were destroyed because of decay, and 177 cases of canned goods, damaged by fire, also met with destruction. Every effort was made to salvage these products for human consumption.

Prosecutions. — Eleven cases were prosecuted by this bureau during June. These involved violations of the Pure Food and Pure Drug Act. Fines ranging from $10 to $25 were imposed.

BUREAU OF CANNERY INSPECTION

Animal Food.—On June 3, definitions and standards for the commercial packing of dog food in California were established by the State Board of Public Health. Representative samples of each pack under the new regulations were submitted to the laboratory, together with a copy of the formula used by the canner. This procedure was followed so as to assist the packers in determining that each formula met the necessary specifications. A system of coding has been introduced for the purpose of marking all goods packed in California and shipped outside of the State. In general, the packers of animal foods are coöperating in placing the industry on a sound basis.

Asparagus.—Seasonal packing of asparagus was completed in June. The federal control instituted on the packing of this product did not interfere with the volume, and a full packing season to the end of June was enjoyed by the industry. As a whole, the asparagus of 1936 is of very good quality.

Miscellaneous Products.—Among other food products packed during June under the supervision of the Bureau of Cannery Inspection were the following: artichokes, peas, health foods, hominy, lima beans, mushrooms, olives, pork and beans, puree, tomato soup, specialties, vegetable salad, tuna, and mackerel.

BUREAU OF SANITARY INSPECTIONS

Rodent Survey.—The rodent survey carried on by this bureau was continued during June in sections of Sonoma, Santa Cruz, Monterey, San Luis Obispo, Modoc, and Lassen counties. A total of 3,130 rodents was collected and examined. Intensive rodent-control activities are under way in Modoc and Lassen counties under the supervision of county agricultural commissioners coöperating with the State Department of Apriculture and federal officials. Rodent-control activities were also carried on in sections of Contra Costa, Alameda, and San Mateo counties. Totals of 18,000 acres were inspected and 60,000 acres were reinspected. . . .

Ocean Beaches.—At the request of Oakland city officials, investigations of complaints relative to the pollution of ocean beaches, both north and south of San Francisco, were investigated. It was found that twelve beaches were more or less littered with garbage and refuse of all sorts. Identification of material picked up on the beaches indicated that most of the refuse came from the boats which dumped Oakland garbage at sea. It was arranged to have all waste matter removed at the expense of the city, and crews of men were transported to clean the beaches thoroughly. Investigations were started to determine why refuse from the Oakland garbage boats floated ashore at this time. Ordinarily this waste is dumped at considerable distance from the shore line and is carried out to sea by strong currents.

Highway Eating Places Inspected.—Food supply places and service stations along the Yuba Pass Highway in Nevada and Placer counties and United States Highway

No. 50 in El Dorado County were inspected, with the following results:

Food-supply places inspected	72
Number satisfactory	38
Number with minor defects	22
Number unsanitary	12
Service stations inspected	48
Number satisfactory	31
Number with minor defects	11
Number insanitary	6

BUREAU OF LABORATORIES

Bacteriological Laboratory.—Following is the diagnostic detail of examinations made in this laboratory during the month of June:

Slides, prepared and examined for the diagnosis of diphtheria, tuberculosis, gonorrhea, malaria, rabies culture identification	3,107
Plate cultures made, examined and selected colonies transplanted during examination for typhoid, paratyphoid, dysentery, food poisoning, plague, unknown determinations, etc.	729
Culture tubes inoculated (fluid and solid media) for testing sugar reactions and other cultural characteristics during identification of unknown cultures isolated in blood, stool and food examinations, and sent in by other laboratories	908
Animal inoculations for virulence tests, Kellogg tests, tuberculosis of kidneys, meningitis, standardizing vaccines, making immune serums, etc.	478
Precipitation tests, principally for syphilis	4,422
Complement-fixation tests, principally for syphilis, but also for identification of cultures and immune serums	3,558
Agglutination tests, each one involving the making of eight different serum dilutions, centrifuging and examining; required for Widal tests for typhoid, undulant fever, typhus, tularemia, and for identification of cultures, etc.	492
Total of procedures	13,694
Number of cases represented	4,624

Biologics.—The following biologics were made in the bacteriological laboratory and distributed during the month of June:

Vaccine issued by the Bacteriological Laboratory during the month of June, 1936:	Cubic Centimeters
Triple typhoid	1205
Typhoid	600
Agglutinating antigens:	
Typhoid	355
Paratyphoid alpha	250
Paratyphoid beta	275
Brucella abortus	69
Tularense	57
Antigen for diagnosis of syphilis:	
Kolmer	100
Kahn	955
Kline	10
Tubes of culture media	204
Antisera:	
Typhoid	4
Paratyphoid alpha	1
Paratyphoid beta	1
Flexner dysentery	4
H R Y dysentery	2
Shiga dysentery	2
Sonne dysentery	3
Suipestifer	1
Aertrycke	1
Amboceptor	20

Ophthalmia neonatorum prophylactic outfits distributed during the month of June, 1936:	
Number of ampoules	5122

Chemical Laboratory.—During June two hundred official samples and thirty-one unofficial samples of foods and drugs were examined in this laboratory. These consisted mostly of wines, alimentary paste, flavoring extracts, and miscellaneous products. Out of the 231 samples examined, 136 were determined as illegal. In addition to these, fifteen samples were analyzed for state institutions, all but one of which were determined as legal.

Water and Sewage.—During June, 139 bacterial examinations and 148 chemical examinations of water were made in this laboratory. In addition, there were fourteen bacterial examinations of oysters and three bacterial examinations of clams.

BUREAU OF REGISTRATION OF NURSES

Activities of the Chief.—The biennial conventions of the American Nurses' Association, the National Organization for Public Health Nursing, and the National League of Nursing Education were attended in Los Angeles on June 21 to 27. It is estimated that 11,000 nurses from all parts of the United States were in attendance. Meetings were valuable from an administrative standpoint. The attendance of the chief and inspector of the bureau was profitable. During the month, studies of facilities for teaching medical nursing were made in one hospital. Classes were visited and commencement exercises attended at several schools of nursing. Preparation of examination questions and compilation of statistical material occupied a considerable portion of the month.

BUREAU OF SANITARY ENGINEERING

Sewage Disposal

New Projects.—Discussion of sewage disposal projects which have been dormant for quite a while have been revived at Placerville and at San Diego. Two of the state institutions, Sonoma State Home and Napa State Hospital, have projects which have been discussed with the Bureau with a view to inclusion in the next biennial budget. Bond issues or proceedings are in progress for sewer systems or changes in sewage disposal at Decoto, Carmel, Eureka, Shafter, and Ione. At Avenal, discussions are on over public ownership of an existing private sewer system and its extension to serve outlying areas. All these matters have been under discussion with the Bureau. Application was filed by the city of Stockton for additions to its sewage disposal facilities, and permit has been granted. The new sewage-treatment plant at Camarillo State Hospital was inspected, also the new plant at Santa Maria.

Complaints.—Sewage disposal at Napa and Napa State Hospital was investigated on account of complaints by fishermen against pollution of Napa Slough. The Bureau has made tests to measure the degree of pollution and has outlined a project for Napa State Hospital. Other complaints concern sewage disposal at St. Helena, pollution of Mokelumne River by winery wastes, and sewage disposal difficulties at Gorman. At the request of the County Health Officer, a question as to how far a home owner might be expected to sewer to connect with the public sewer system was looked into at Rodeo.

Community Sanitation.—With the close of this biennium there have been 9,844 privies constructed under this program. The project represents a contribution by home owners of $194,343.17, and 90,650 man days' labor contributed by WPA.

Special Mention.—Sewage disposal at Steckel Park near Santa Paula was reported on. Tests made at Belvedere Cove on account of the sewage menace to swimming.

Routine Inspections.—Routine inspections were made at Pacific Grove, Del Monte, Golden Gate Park, and Porterville.

Water

New Projects. — At the request of the Sonoma State Home, a new water treatment, involving a rearrangement of water supply, was blocked out for Sonoma Farm Colony. National City is building a new water-softening plant and has applied for a permit. It is noteworthy that this is the third large city to go in for water-softening in California within recent months, the others being San Mateo, where two kinds of water-softening plants are used, and Santa Barbara.

Filtration of the water supply of Kern County Park was discussed with the county surveyor. A filter plant at Summer Home Park to filter Russian River water was put into service this month. It is understood to be doing very good work on this river water.

Complaints.—Complaint was received from the city of Firebaugh against picnic grounds and a dance hall on a small piece of ground on the river bank above the Firebaugh intake. The complaint was referred to the County Health Officer. At Salinas the question was up as to getting an abandoned water well in a public street sealed up so as to prevent pollution of the underground water strata. A complaint against an open reservoir at San Carlos was referred to the sanitary inspectors. Another complaint was received against the poor grade of water in Grass Valley.

Special Mention.—Considerable time was spent on a new water supply for Locke, where recently a serious typhoid outbreak was traced to leakage of sewage into the water-supply well. An extensive survey into the condition of Monterey Bay as a source of water supply for the sardine canneries, was started by the Bureau this month. Tule River was surveyed on account of complaints of pollution by resorts. National Ice and Cold Storage Company bottled water, San Francisco, was inspected on request of the United States Public Health Service for use on common carriers. Further tests were made on Lake Elsinore in connection with the heavy algae infestation that has affected this lake for several months. A communication was addressed to the water department of San Francisco, with respect to covers on the city reservoirs.

Routine Inspections.—Routine inspections made at Santa Cruz, Napa State Hospital, and Sacramento filtration plant.

Mosquitoes.—Advice was given on mosquito control in Bakersfield and Marysville.

Shellfish. — After considerable effort, some men who were digging clams from highly polluted mud flats near San Quentin Prison were apprehended and the case dealt with through the Division of Fish and Game. Several sources of shellfish in San Francisco and Los Angeles were inspected for approval for use on interstate carriers, at the request of the United States Public Health Service. Difficulty with the safety of clams shipped from Oregon required considerable investigation and correspondence with the Oregon State Health Officer. Clams and other shellfish were checked up on in Marin County, Richmond, San Rafael, and San Francisco markets. The Bureau is endeavoring to get certain sewers in South San Francisco changed so as not to menace oyster beds in that locality.

Swimming Pools. — Swimming-pool filters were discussed for an orphange near Danville, also an unusual pool proposed in Contra Costa County. Plans for severing a cross-connection in the swimming pool at Beverly Hills were submitted and reviewed.

Miscellaneous.—A comprehensive paper by Abel Wolman, Chairman, National Water Resources Committee on Federal Activities in this field, was discussed by the Bureau at Los Angeles. Also two papers on sewage-disposal subjects were prepared for the University of Southern California Civic Training School. Several conferences were necessary in connection with the question over the status of public health engineers under the Engineers Registration Act. A conference was held with the Public Health Service over the future certification of waters used on common carriers. The Bureau is finding that this is becoming a very time-consuming chore. At the request of the City Health Officer of Berkeley, rinse waters in several laundries were studied for contamination and other characteristics, with a view to possible regulation. A report on sewage disposal in the central valleys was prepared for the Central Valleys Water Project. Considerable time was spent in preparing for instruction to be given by the Bureau at a sanitary school to be held at the University of California in July and August.

Laboratory.—Rendered opinion on 139 samples of water, fourteen samples of oysters, and two samples of clams.

BUREAU OF VITAL STATISTICS

More Births.—During the first four months of 1936 there were 26,250 births registered in California, as compared with 25,495 such events registered during the first four months of 1935. This represents a gain of 755 births.

More Marriages.—During the first five months of 1936 there were 20,604 marriages performed in California, as compared with 19,419 during a similar period of 1935. This represents a gain of 1,185 marriages.

Search of Records.—There were 1,567 searches of vital statistical records made by the Bureau during June and 620 certifications were sent out. The balance of the searches represent verifications and affidavits to amend records already on file.

BUREAU OF CHILD HYGIENE

Activities.—The Chief of the Bureau of Child Hygiene spent ten days out of the State attending the conference of Chiefs of Bureaus of Child Hygiene in Washington, D. C., under the auspices of the Federal Children's Bureau. At this conference material was presented for building new programs for maternal and child health. During the course of the conference the Chief spoke to its members on the California plan for health supervision of the children of migratory families. She discussed the supervision and administration of bedside nursing delivery service with the group at Maternity Center Association in New York, which has had this type of program in active service for some years. She also visited two full-time county health units in Kentucky to observe the interrelationship of child health with the full-time health unit there.

After returning, the Chief made field trips in order to organize the work for the new staff being added to the Bureau, and had many staff conferences with members, outlining and planning their work. On these field trips a two-day health conference was conducted at which eighty-five children were examined. A pediatrician joined the staff on June 2. She spent three days in the office during the course of the month, discussing with the Chief plans of work and arranging necessary materials. During the rest of the month she visited nine counties, inspecting six hospitals with maternity departments, four homes, and two county hospitals. In addition, she conducted fourteen child health conferences, examining 374 children, working with eleven nurses, and interviewing four health officers. A public health nurse joined the staff on June 15 and was assigned, temporarily, to the inspection of maternity homes and hospitals. She visited three counties during the course of which she made five investigations and inspected four licensed maternity homes and five licensed hospitals. During the month, distribution was made of 3,859 pieces of literature included in which were 373 sets of postnatal letters and 517 sets of prenatal letters.

BUREAU OF TUBERCULOSIS

Activities of the Chief.—During June the Chief of this bureau inspected the following tuberculosis hospitals: Olive View and Los Angeles General in Los Angeles County, Santa Barbara County Hospital, Monterey County Hospital, Santa Clara County Hospital, the San Francisco Hospital, the San Mateo County Hospital, and the Hassler Health Farm.

Meetings were held with the County Board of Supervisors of Monterey County and with the boards of supervisors of Tulare and Kings counties. Many conferences were held with health officers, county physicians, school executives, and other officials. A large part of the Chief's time was devoted to preparation for a survey of migratory labor in California, with special reference to tuberculosis problems among migrants. Statistical reports of tuberculosis morbidity and mortality in Monterey County were prepared. Preliminary reports of conditions pertaining to the health of migratory laborers in Riverside and Kern counties were received.

HEALTH OFFICERS OF THE STATE OF CALIFORNIA BY COUNTIES

June 15, 1936

Alameda County	Dr. I. O. Church, Oakland
Alameda	Dr. Peter Paul Baron
Albany	Dr. Jack L. Stein
Berkeley	Dr. Frank L. Kelly
Emeryville	Dr. Charles Newell Mell
Hayward	Nelson E. Clemens, D. V. M.
Livermore	Dr. Paul E. Dolan
Oakland	Dr. N. N. Ashley
Piedmont	Dr. Harry J. Smith
Pleasanton	Dr. D'Arcy Chace
San Leandro	Under County Supervision

Alpine County	
Amador County	Dr. J. M. Wakefield, Sutter Creek
Amador City	Mr. Ben White
Jackson	Mr. Earl J. Garberini
Plymouth	Mr. Pete Laverone
Sutter Creek	Mr. William T. Connors
Butte County	B. C. Epperson, D. O., Oroville
Biggs	Mr. Leon Brink
Chico	Mr. Charles E. Tovee
Gridley	Dr. W. S. Lavy
Oroville	Dr. Charles Benninger
Calaveras County	Dr. George P. Cooper, Angels Camp
Angels Camp	Dr. E. W. Weirich
Colusa County	Dr. G. W. Desrosier, Colusa
Colusa	Dr. G. W. Desrosier
Williams	Dr. Charles F. Keith
Contra Costa County	Dr. W. A. Powell, Martinez
Antioch	Dr. Fred P. Nevius
Concord	Under County Supervision
El Cerrito	Dr. E. R. Jackson
Hercules	Under County Supervision
Martinez	Under County Supervision
Pinole	Under County Supervision
Pittsburg	Dr. H. E. Peters
Richmond	Dr. Charles R. Blake
Walnut Creek	Under County Supervision
Del Norte County	Dr. Francis M. Stump, Crescent City
Crescent City	Dr. F. M. Stump
El Dorado County	Dr. A. A. McKinnon, Placerville
Placerville	Mr. James P. Morton
Fresno County	Dr. W. F. Stein, Fresno
Clovis	Dr. M. S. McMurtry
Coalinga	
Firebaugh	Mr. Frank Borrecco
Fowler	Mr. Retel L. H. Fearnside
Fresno	Dr. C. Mathewson
Kingsburg	Dr. Ewald A. Larson
Parlier	Mr. M. O. Daggs
Reedley	Dr. R. E. Allen
Sanger	Dr. Benjamin H. Viau
San Joaquin	Under County Supervision
Selma	Dr. Raymond R. Scott
Glenn County	Dr. F. M. Lawson, Willows
Orland	Dr. T. H. Brown
Willows	Dr. Etta S. Lund
Humboldt County	Dr. Charles C. Falk, Jr., Eureka
Arcata	Dr. B. Cooper
Blue Lake	Dr. George P. Purlenky, Arcata
Eureka	Dr. W. J. Quinn
Ferndale	Dr. O. B. Barron
Fortuna	Dr. H. W. Comfort
Imperial County	Dr. Warren F. Fox, El Centro
Brawley	Dr. J. L. Parker
Calexico	Dr. W. T. Heffernan
Calipatria	Dr. J. A. Wallace
El Centro	Under County Supervision
Holtville	Dr. H. B. Graeser
Imperial	Under County Supervision
Westmoreland	Dr. J. N. Garner
Inyo County	Dr. Harvey W. Crook, Bishop
Bishop	Dr. Harvey Crook
Kern County	Dr. Joe Smith, Bakersfield
Bakersfield	Dr. P. J. Cuneo
Delano	Under County Supervision
Maricopa	Dr. K. D. Cook
Taft	Dr. Oran Newton
Tehachapi	Under County Supervision
Kings County	Dr. Aaron S. Torrens, Hanford
Corcoran	Dr. J. H. Van Vorhis
Hanford	Dr. J. A. Crawshaw
Lemoore	Dr. W. P. Byron
Lake County	Dr. Luther J. Calahan, Lower Lake
Lakeport	Mr. Marion L. Hendricks
Lassen County	Dr. C. I. Burnett, Susanville
Susanville	Dr. George Scott Martin
Los Angeles County	Dr. J. L. Pomeroy, Los Angeles
Alhambra	Under County Supervision
Arcadia	Under County Supervision
Avalon	Under County Supervision
Azusa	Under County Supervision
Bell	Under County Supervision
Beverly Hills	Dr. Charles F. Nelson
Burbank	Under County Supervision
Claremont	Under County Supervision
Compton City	Under County Supervision
Covina	Under County Supervision
Culver City	Under County Supervision
El Monte	Under County Supervision
El Segundo	Under County Supervision
Gardena	Under County Supervision
Glendale	Under County Supervision
Glendora	Under County Supervision
Hawthorne	Under County Supervision
Hermosa Beach	Under County Supervision
Huntington Park	Under County Supervision
Inglewood	Under County Supervision
LaVerne	Under County Supervision
Long Beach	Dr. G. E. McDonald
Los Angeles	Dr. George Parrish
Lynwood City	Under County Supervision
Manhattan Beach	Under County Supervision
Maywood	Under County Supervision
Monrovia	Under County Supervision
Montebello	Under County Supervision
Monterey Park	Under County Supervision
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Pomona	Under County Supervision
Redondo Beach	Under County Supervision
San Fernando	Under County Supervision
San Gabriel	Under County Supervision
San Marino	Under County Supervision
Santa Monica	Under County Supervision
Sierra Madre	Under County Supervision
Signal Hill	Dr. V. L. Fisher, L. B.
South Gate	Under County Supervision
South Pasadena	Dr. Albert Supple
Torrance	Under County Supervision
Tujunga	Under County Supervision
Vernon	Dr. H. F. Becker
West Covina	Under County Supervision
Whittier	Under County Supervision
Madera County	Dr. Lee A. Stone, Madera
Madera	Under County Supervision
Chowchilla	Dr. A. C. Atwood
Marin County	Dr. H. O. Howitt, San Rafael
Belvedere	Dr. C. W. Clark, San Rafael
Corte Madera	Dr. L. L. Robinson, San Rafael
Fairfax	Dr. Bernard J. Conroy
Larkspur	Dr. L. L. Robinson, San Rafael
Mill Valley	Mr. Will Falley
Ross	Dr. Anne L. Brady
San Anselmo	Dr. Harry N. Hensler
San Rafael	Dr. Joseph Hawkins
Sausalito	Dr. C. F. Larson
Mariposa County	Dr. John S. Webster, Mariposa
Yosemite	Dr. Hartley G. Dewey
Mendocino County	Dr. H. O. Cleland, Ukiah
Fort Bragg	Dr. Royal Scudder
Point Arena	Mr. A. L. McCallum
Potter Valley	Under County Supervision
Ukiah	Dr. J. H. Hansen
Willits	Dr. Raymond Babcock
Merced County	Dr. James A. Parker, Merced
Dos Palos	Dr. E. A. Patterson
Gustine	Dr. A. W. Gustafson
Livingston	Mr. A. Stanley Court
Los Banos	Dr. L. R. Hillyer
Merced	Dr. A. S. Parker
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Adin	Under County Supervision
Alturas	Dr. W. E. Coppedge
Mono County	Dr. Robert K. Harker, Bridgeport
Monterey County	Dr. Roy M. Fortier, Salinas
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Kings City	Under County Supervision
Monterey	Under County Supervision
Pacific Grove	Under County Supervision
Salinas	Miss Marie Fidel
Soledad	Under County Supervision
Napa County	Dr. Robert S. Northrop, Napa
Calistoga	Mr. George C. Locey
Napa	C. C. Hackett, D. D. S.
St. Helena	Mr. C. C. Johnson
Nevada County	Dr. Carl P. Jones, Grass Valley
Grass Valley	E. M. Rosener, D. V. M.
Nevada City	Mr. George H. Calanan
Orange County	Dr. K. H. Sutherland, Santa Ana
Anaheim	Under County Supervision
Brea	Under County Supervision
Fullerton	Under County Supervision
Garden Grove	Under County Supervision

Huntington Beach	Under County Supervision
Laguna Beach	Under County Supervision
La Habra	Under County Supervision
Newport Beach	Under County Supervision
Orange	Under County Supervision
Placentia	Under County Supervision
San Clemente	Under County Supervision
Santa Ana	Under County Supervision
Seal Beach	Under County Supervision
Tustin	Under County Supervision
Placer County	Dr. Theodore Snypp, Auburn
Auburn	Dr. Theodore Snypp
Colfax	Dr. R. C. Atkinson
Lincoln	Dr. A. McArthur
Rocklin	Under County Supervision
Roseville	Dr. R. H. Eveleth
Plumas County	Dr. John Decker, Delleker
Riverside County	Dr. W. A. Jones, Riverside
Banning	Mr. Edward Miller
Beaumont	Mr. H. K. Morse
Blythe	Dr. W. H. Chapman
Corona	Dr. Denver D. Roos
Elsinore	Dr. H. Baer
Hemet	Dr. Leslie J. Clark
Indio	Dr. R. M. Gray
Perris	Dr. I. W. Kellogg
Riverside	Dr. W. A. Jones
San Jacinto	Dr. W. L. Chilcott
Sacramento County	Dr. Hugh Beattie, Elk Grove
Isleton	Dr. J. H. Leimbach
North Sacramento	Dr. W. E. Weddle
Sacramento	Dr. Herbert F. True
San Benito County	Dr. L. C. Hull, Hollister
Hollister	Mr. Fred A. Earle
San Juan Bautista	Mr. E. Zanetta
San Bernardino County	Dr. Edwin B. Godfrey, San Bernardino
Barston	Under County Supervision
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Ontario	Dr. C. L. Emmons
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Rialto	Dr. L. P. Barbour
San Bernardino	Dr. G. Stirling Landon
Upland	Dr. John B. Craig
San Diego County	Dr. A. M. Lesem, San Diego
Chula Vista	Dr. F. E. Ashcroft
Coronado	Dr. Raymond Spear
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Oceanside	Under County Supervision
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Tracy	Under County Supervision
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Arroyo Grande	Under County Supervision
Paso Robles	Under County Supervision
San Luis Obispo	Under County Supervision
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Burlingame	Dr. Matthew F. Desmond
Colma	Under County Supervision
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Hillsborough	Mr. C. M. Hirschey
Menlo Park	Under County Supervision
Redwood City	Mr. Con Drathman
San Bruno	Dr. F. Holmes Smith
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San Mateo	Dr. James A. Warburton
South San Francisco	Dr. J. O. McMills
Santa Barbara County	Dr. R. C. Main, Santa Barbara
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Santa Barbara	Dr. C. T. Roome
Santa Maria	Under County Supervision
Santa Clara County	Dr. C. M. Burchfiel, San Jose
Alviso	Dr. J. I. Beattie, Santa Clara
Gilroy	Under County Supervision
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Palo Alto	Mr. Louis Olsen
San Jose	Dr. H. C. Brown
Santa Clara	Under County Supervision
Sunnyvale	Under County Supervision
Willow Glen	Under County Supervision
Santa Cruz County	Dr. Samuel B. Randall, Santa Cruz
Santa Cruz	Dr. Mahlon D. McPherson
Watsonville	Dr. George P. Tolman
Shasta County	Dr. O. J. Hansen, Redding
Redding	Mr. Winfred Wright
Sierra County	Dr. Carl C. Sutton, Downieville
Downieville	Under County Supervision
Loyalton	Mr. Donald M. Martin
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Dorris	Dr. A. B. Gray
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Etna	Dr. E. W. Bathurst
Fort Jones	Mr. J. H. Wise
Montague	Mr. Frank French
Mt. Shasta	Dr. James B. McGuire
Yreka	Dr. Charles Pius
Solano County	Dr. W. C. Jenney, Vacaville
Benicia	Dr. N. J. Crisp
Dixon	Mr. H. C. Grove
Fairfield	Dr. C. C. Purviance
Rio Vista	Mr. Floyd N. Holmes
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Cloverdale	Dr. D. C. Oakleaf
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Petaluma	Dr. Henry S. Rogers
Santa Rosa	Mr. E. J. Helgren
Sebastopol	Dr. Chester Marsh
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Modesto	Under County Supervision
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Yuba City	Dr. J. H. Barr
Tehama County	Dr. James L. Faulkner, Red Bluff
Corning	Dr. Caroline Howes
Red Bluff	Dr. R. G. Frey
Tehama	Dr. J. H. Belyea, Los Molinos
Trinity County	Dr. W. M. Wilson, Weaverville
Tulare County	Dr. Elmo R. Zumwalt, Tulare
Dinuba	Dr. P. D. Miller
Exeter	Dr. W. L. Nichols
Lindsay	Dr. Annie L. Bond
Porterville	Dr. Phillip S. Barber
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Sonora	Dr. William L. Hood
Ventura County	Dr. A. A. Maulhardt, Oxnard
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Ojai	Under County Supervision
Oxnard	Under County Supervision
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Yolo County	Dr. George M. Uhl, Woodland
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Marysville	Dr. R. Hanagan, D. V. M.
Wheatland	Dr. F. W. Didier

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. IX, No. 9, September, 1911

From Some Editorial Notes:

Purely Personal.—The secretary of the Society and the editor of the *Journal* is tired, very tired. He has been ordered away to take a complete rest and to think as little as possible about the Society, its work, or its *Journal.* The Council has granted him a leave of absence for some months, and the Publication Committee has kindly undertaken to look after the publication of the *Journal,* under temporary editorship of Dr. D'Arcy Power. The work of building up and conducting the Society's affairs, while it has been at times hard and has involved a good deal of worry during the lean years, has also been most pleasant; to see something of real value grow from almost nothing has been a keen pleasure. Therefore, it is not without a distinct feeling of sadness that the secretary-editor obeys the instructions of his physician, closes his desk and leaves his office, to take the first real vacation in twenty years. To every member of the Society who has helped—and many have helped more than they know—the secretary-editor wishes to extend his thanks. . . .

(The above paragraph is from the pen of the late Philip Mills Jones, founder and editor of the official journal of the Medical Society of the State of California.)

From an article on "Clinical Observations on Migraine" by Herbert C. Moffit, M. D., San Francisco.

It is a pleasure in this gathering of specialists once again to acknowledge the great debt of the clinician to ophthalmology. No medical student of today should leave school and hospital without command of the methods of eye examination—the ophthalmoscope to the internist is as indispensable as the stethoscope. But during incursions into the borderland of your activity, the clinician not infrequently has chance to observe that the specialist, early in his career, builds too high a fence about his preserves and cuts off his view of the general broad field. A proper training in clinical medicine and neurology is essential to the interpretation by the ophthalmologist of many pupillary, muscle and fundus phenomena; the judicial habit of mind acquired at the bedside will curb tendencies toward narrow specialism and keep in check the enthusiastic advocate of eye strain as a source of all evil. . . .

From an article on "A Résumé of the Modern Operative Procedures in Ear Affections" by Dr. H. B. Graham, M. D., San Francisco.

It is not my purpose to give a complete description or discussion of the various operative procedures that are followed by the various otologists of today, but to review them cursorily in order to give my personal impressions concerning their value. . . .

From an article on "Some Types of Intestinal Indigestion Occurring in Young Children" by Langley Porter, M. D., San Francisco.

Any who have had experience in the examination of the stools of young children cannot fail to have been struck by the frequency with which free starch is found; nor can they have failed to notice that almost invariably the presence of this starch in the stools is accompanied by a very definite, although not uniform, series of clinical symptoms. . . .

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† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in Front Advertising Section, Page 17)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By Charles B. Pinkham, M.D.
Secretary-Treasurer

News

"Dr. Samuel A. Twain, Berkeley physician, today stood convicted on ten counts of failure to keep records of narcotic prescriptions. The doctor . . . was found guilty by a jury last night after forty-five minutes' deliberation. . . . Doctor Twain was arrested last December, and, in addition to charges of failing to keep records, was accused on two counts of illegal possession of narcotics. He was acquitted on this charge in May by a jury in Superior Judge Frank M. Ogden's court in Oakland." (Oakland *Tribune,* July 12, 1936.)

"Headquarters of an illegal operation ring, said by police to perform as many as twenty abortions daily, were raided at 327 Fillmore Street and 339 Waller Street. . . . Police Inspectors George Engler and Harry Husted said the Fillmore Street address, equipped with several beds and rest-room facilities, was the ring's appointment office. Interviews with a dozen women who visited there yesterday afternoon disclosed information which led the officers to the abortion 'hospital' at 339 Waller." (San Francisco *Examiner,* July 12, 1936.)

"At least one, and perhaps more, of the thirty-one defendants indicted in connection with the alleged operation of a state-wide illegal operation ring are prepared to turn State's evidence, it was indicated today. This was indicated when twenty-two of the defendants were arraigned before Superior Judge George J. Steiger on charges of conspiracy to commit illegal operatons and the commission of illegal operations. The court set October 13 as the trial date. . . . One defendant named in the indictment, Norman Powers, failed to appear in court. He is sought. William Byrne, one of the defendants, was arrested as he left the courtroom on a charge of wife abandonment on a complaint sworn to by William Heistuman, 3842 Fulton Street, his father-in-law." (Press dispatch dated San Francisco, July 10, 1936, published in the Oakland *Tribune,* July 10, 1936.)

"Twenty-three defendants in the coast-wide criminal operations ring faced Superior Judge George J. Steiger today to hear Assistant District Attorney John J. McMahon demand a swift trial 'because there are rumors of attempts to fix this case in San Francisco. . . . Reports have been circulating that R. L. Rankin, the central figure in this case, is trying to fix this case,' Mr. McMahon said. 'The story is that he " 'has a good *in* in San Francisco' " and will be able to stall this case. No such thing is going to happen. We want this trial to go on swiftly, and will oppose any continuances.' Rankin, one of the defendants, made no comment on Mr. McMahon's statement. Mr. McMahon also demanded that $2,500 bail of W. Norman Powers, another defendant, be forfeited when he failed to appear in court, despite the fact that Clarence Morris, defense attorney, produced a doctor's certificate stating Powers is ill in Seattle. 'I understand Powers is still carrying on his nefarious business in Seattle right now and that the medical certificate came from Rankin's own firm,' Mr. McMahon declared. Judge Steiger declined to forfeit the bail on Mr. Morris' promise that Powers would appear in court Monday." (San Francisco *News,* July 9, 1936.)

"The police homicide detail cracked down on three alleged abortion ring headquarters yesterday and arrested three men and five women. Acting on information from a woman informer, the police first closed in on a 'hospital'

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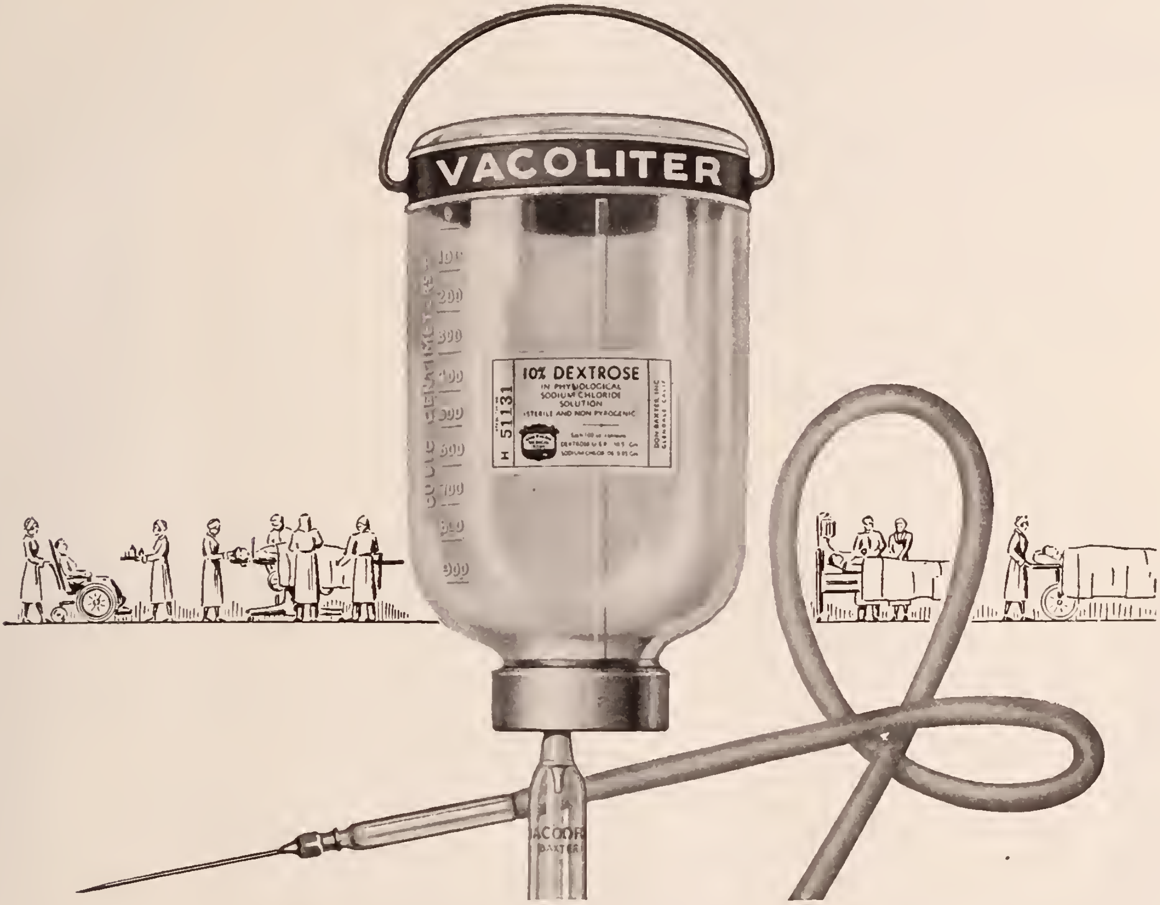
† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in Front Advertising Section, Page 18)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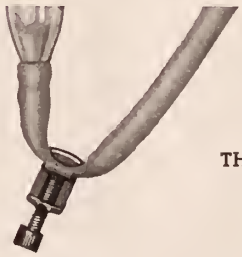

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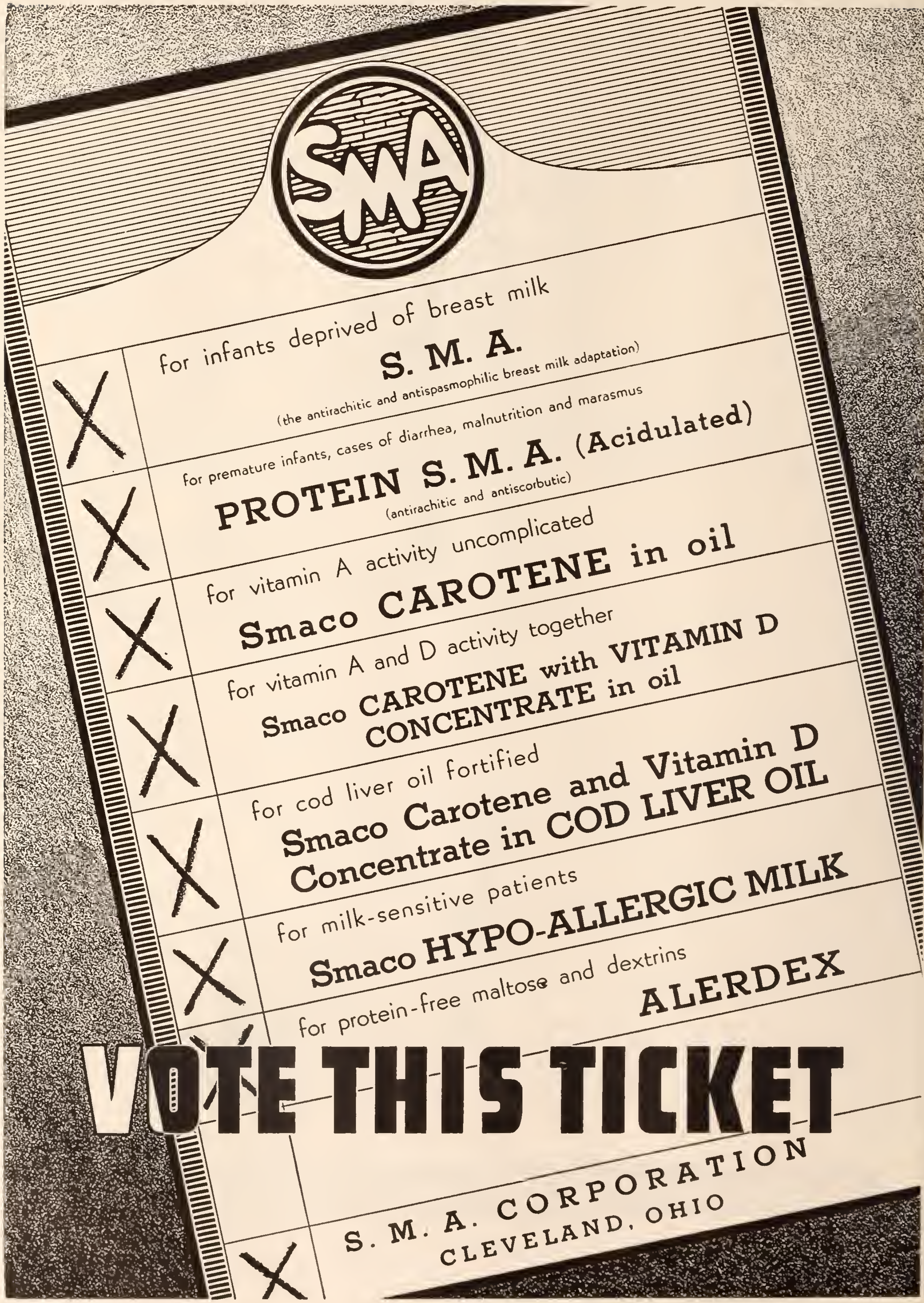

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Law Pursues Feeble Germicides and "Health" Spray That Failed.—Disinfectants predominate in the list of prosecutions terminated during the past month under the Federal Insecticide Act, the Food and Drug Administration reports. Ineffective disinfectants are not only economic cheats but real health hazards, enforcing officials declare. Moth and ant preparations and agricultural insecticides are also included in the list. All defendants pleaded guilty.

James A. Haines, trading as the Haines Products Company, Carey, Ohio, was fined $50 and costs, total $70.50, for shipping in interstate commerce "H & D Health Spray," a product misbranded and adulterated under the provisions of the Insecticide Act. The "Health Spray" contained 94 per cent of water (a fact which was not mentioned on the label) and less of the active constituents than claimed. It was recommended as a disinfectant and germ destroyer for use by morticians, doctors, hospitals, homes, hotels, schools, state institutions, office buildings, beauty parlors, dry cleaners; steamship, cab, bus, and railroad companies.

It was further recommended for preventing the spread of colds, influenza, and other contagious diseases; to purify the air; to banish all odors, destroy moths, and drive out insects. The preparation was ineffective either as a germicide, disinfectant, or antiseptic; would not purify the air, banish odors, destroy moths, or drive out all insects, nor would it maintain or improve health, as the name would imply.

The American Pharmaceutical Company, a New Jersey corporation doing business in New York City, was fined $100 for shipping misbranded and adulterated "Solution Cresol Compound, U. S. P.," which failed to meet the requirements of the United States Pharmacopeia. The product was labeled so as to deceive and mislead the purchaser in that phenols other than U. S. P. Cresol, and fatty material other than linseed oil, were substituted for U. S. P. Cresol and linseed oil, and was further represented as containing only water as an inert ingredient, whereas it contained glycerin in addition to the water.

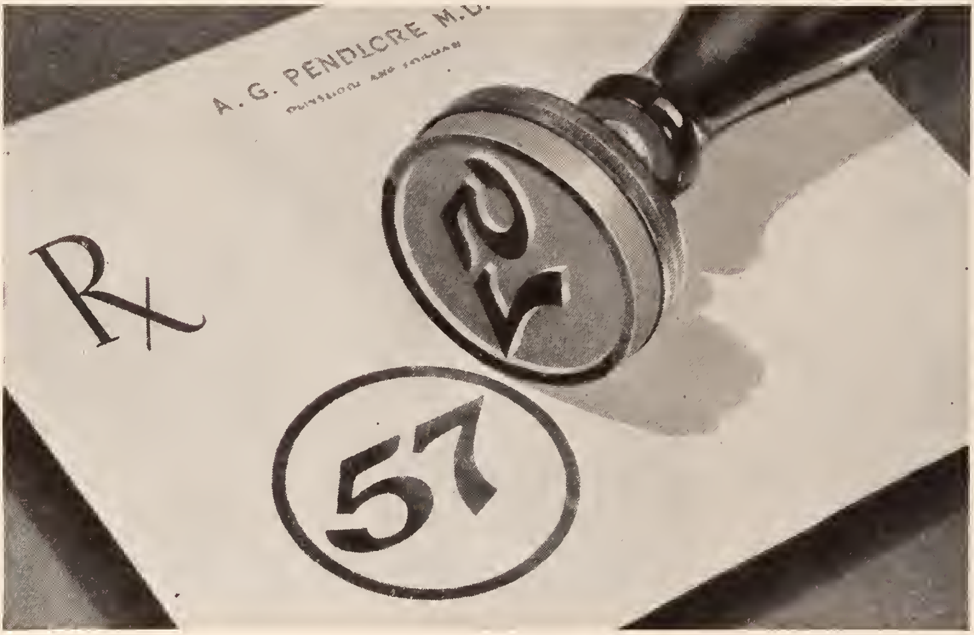
Three Misbranded Products.—A prosecution against Spratt's Patent, Ltd., Newark, New Jersey, resulting in a fine of $150, involved three misbranded products, "Spratt's Germicide," "Spratt's Antiseptic Germicidal Flea Soap," and "Spratt's Flea and Insect Powder," the last-named preparation being also adulterated. The Germicide contained inert substances, the labeling failing to bear the declaration of ingredients required by the Federal Insecticide Act.

The labeling also bore a number of false and misleading claims, among which were representations that the product was non-poisonous, would kill microbes of all kinds, would disinfect tainted land and kennels infected with mange, distemper or any contagious diseases. This preparation was also in violation of the Federal Food and Drugs Act because of false and fraudulent claims for gastritis, distemper, etc. The "Antiseptic Germicidal Flea Soap" was neither antiseptic nor germicidal, used as directed. It would not sterilize veterinary instuments, as claimed on the label, or be an effective treatment for ticks on dogs.

This product was also misbranded under the Federal Food and Drugs Act in that the label bore false and fraudulent claims of efficacy for use as a disinfectant and germicide for the treatment of wounds, ulcers, etc. The Flea and Insect Powder was both misbranded and adulterated, containing less than the amount of sulphur stated in the labeling.

As the result of an action brought in the Federal Court at Trenton, New Jersey, a fine of $575 was imposed on the Interstate Chemical Manufacturing Company of Jersey City, New Jersey, for shipping short-measure lime sulphur solution. The court suspended $500 of the fine, the remaining $75 to be paid in cash. The company was put on probation for six months with the stipulation that a report be made at the end of each month to the New York station of the Food and Drug Administration to the effect that an investigation had been made of formulas, labels,

(Continued on Page 37)



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(Continued from Page 35)

and batch cards, to determine that the products manufactured were in compliance with law.

"Safe" Product Contains Poison.—The Bonide Chemical Company, Inc., Utica, New York, violated the Insecticide Act by shipping in interstate commerce its misbranded "Antzis," and a fine of $50 was imposed. This product was put up in tubes (similar to tooth paste tubes) fastened to a display card bearing the statement, "I am safe to use about the home." The quoted statement was made the basis of a misbranding charge, since the product contained thallium sulphate, which is a deadly and dangerous poison. Further misbranding was alleged in that the labeling bore extravagant claims which could not be substantiated, to the effect that the preparation would kill pests anywhere, would destroy ant colonies in from three to five hours, and would be effective against cutworms, sow bugs, slugs, etc.

Dainty pink, lavender, and light green hexagonal, perfumed naphthalene blocks with small wire molded in them for suspension purposes, wrapped in cellophane, formed the basis of a prosecution case against the Exo-Nox Company (Ralph Frederick Tipton, sole owner), Cincinnati, Ohio. The labeling bore the direction, "Exo Used for Moths. Unwrap and Hang Up." The product used as directed was worthless for the control of moths. A fine of $10 was imposed.

Henry A. Fischel, Inc., of Philadelphia, Pennsylvania, was prosecuted for failure to place the ingredient statement required by the Federal Insecticide Act on "Florantin." The preparation contained inert substances and was shipped, bought and used for insecticidal purposes. A fine of $10 was imposed.

Caustic Poison Act.—A case brought in the Federal Court for the Southern District of New York against Merck & Company, Rahway, New Jersey, and New York, New York, for violation of the Federal Caustic Poison Act resulted in a fine of $25. The action involved "Creolin Pearson," a product containing over 5 per cent of

(Continued on Page 41)

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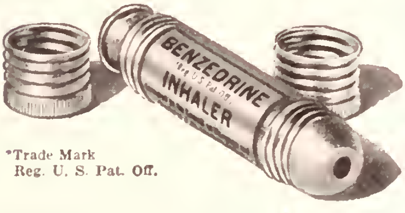

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(Continued from Page 37)

carbolic acid and the labeling failing to state the word "Poison," suitable treatments for use in case of accidental personal injury, and the common name of the dangerous caustic or corosive substance contained in the product.

Two patent medicines found themselves in the toils of the law. "Kojene," was a water solution of oxyquinolin sulphate and sulphur dioxid flavored with wintergreen, falsely and fraudulently represented as a treatment for pyorrhea, trench mouth, gingivitis, soft, spongy, bleeding gums, old sores, skin affections, tonsillitis, pharyngitis, most common throat infections, for relieving soreness and preventing infection. "Bowman's Lax-tiv Pills," was merely a combination of plant laxatives including aloe, but bore broad claims for the restoration of health and the prevention of disease.

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MEDICAL DIRECTORS, PASADENA, CALIFORNIA

The Pacific Rattlesnake.*—Judging from experience on two annual outings with the Sierra Club, a few rattlesnakes are almost certain to be encountered on these trips, arousing uneasiness and fear. It is the purpose of this article to discuss pertinent facts concerning the occurrence, habits, and characteristics of these reptiles, precautions against being bitten and emergency treatment of bites, and to correct some common errors of belief; since more accurate knowledge allays fear and minimizes danger.

Rattlesnakes are the only poisonous snakes of any consequence in California. All other snakes occurring in the state are harmless, if not, as in many cases, distinctly beneficial, and the members of an outdoor organization should be among the leaders in their protection. Snakes are not "slimy," and they are not necessarily "cold," their temperature varying with the immediate environment. There is in fact scarcely any animal cleaner to handle than a snake. Even rattlesnakes are useful destroyers of rodents; but they are sufficiently dangerous to the human race that one can scarcely plead for their conservation.

A number of species and subspecies—i. e., a number of fairly distinct kinds—of rattlesnakes occur within the geographical boundaries of California. Most of them are found only in the warmer and drier regions, some only in the "desert" localities, while but a single one occurs in the northern part of the state and in the Sierra Nevada proper. This is the Pacific rattlesnake. It has been long known to science as Crotalus oreganus; but more recently as a result of the careful studies of L. M. Klauber of San Diego, it has been shown to be a variety, or subspecies, of the widespread prairies rattlesnake, and accordingly is designated by him as Crotalus confluentus oreganus. It may still be called the Pacific rattlesnake, and it "occupies all parts of California except the Colorado and Mojave deserts—from sea level up at least to an altitude of 8,600 feet in the Sierra Nevada." I believe but few, however, are found in the Sierra Nevada above 8,000, though an occasional stray individual may occur up to as much as 9,000 feet in favorable locations, such as southerly exposures. In San Diego County, Klauber says, it occurs on the tops of the highest peaks. One was killed by members of the 1931 outing party at the edge of the meadow just below the Neall Lake Camp of that year. A party of more than 200 persons is almost certain to find some in areas visited below 8,000 feet. Pate Valley seems to be a rather favorable locality.

This species may be designated as moderately large, possibly, though not commonly, up to five feet in length. A mature specimen is not thick-bodied in proportion to its length, a recorded forty-two-inch individual being four inches in circumference. It is rather dark in general coloration, with a well-marked diamond pattern on the body, and with yellow, olive-green, brown, or gray ground coloration.

While a rattler of the size attained by the Pacific rattlesnake must be accounted a dangerous reptile, an inventory of its characteristics contains much that is reassuring to the cool-headed mountaineer capable of intelligent thinking. It is well, first of all, to realize that rattlesnakes are never hunting humans—they do not hunt trouble. While they seem to place some reliance in their powers of defense, and thus in some instances stand their ground if disturbed, they do not show the calm indifference of the skunk to threatened danger, but generally seek safety in retreat. The act of striking is often, if not usually, a reaction of fear rather than of anger or pure viciousness. In fact, an ordinary harmless racer almost invariably puts up a wilder and apparently more vicious fight than a rattler.

(Continued on Page 44)

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*By Charles T. Vorhies, Entomologist, University of Arizona.

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(Continued from Page 42)

While general statements are difficult to make, because there are both specific and individual differences in rattlesnakes, the species under discussion is not the most excitable or dangerous. That distinction seems to belong to the desert diamond rattlesnake (Crotalus atrox) of Texas, Arizona, and the deserts of southeastern California. The Pacific rattlesnake in southern California is given credit for a very inoffensive disposition by Dr. Joseph Grinnell, who says: "In all our experience the rattlers of this region proved to be mild-mannered and inoffensive, seeking to make their escape in every instance, and only striking when worried to the last degree. Neither myself nor my companions had any 'narrow escapes' from being bitten that we were aware of." The following excellent advice from the same source as the above quotation may well be thoughtfully considered by outing enthusiasts: "There are lots of interesting things to be learned about rattlesnakes in their native haunts, and we would urge students having the opportunity to avail themselves of it by finding out everything possible. The only danger we can conceive of, that when a rattler is stepped upon unawares, is past as soon as you have caught sight of the reptile. You are at once on your guard. Retain your common sense. Don't go into hysterics and think you must batter the snake to death at once. For it won't run after you! Exercise reasonable caution, give your curiosity full sway, and see what you can find out."

Rattlers are popularly supposed to seek out exposed situations, where they may bask for hours in the sun, and yet those club members who were in Pate Valley in 1931 will remember that one was killed there by only a few minutes' exposure to the midday sun on a sandy area. The fact is that rattlesnakes are primarily nocturnal, or at least crepuscular, especially during the warmest months of the year. At these times they lie in shaded situations during the hottest period of the day, avoiding bare earth and exposed rock, where

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the accumulated heat would soon be fatal. In spring and autumn, on the other hand, when the nights are too cold for activity, they warm themselves by day on sand or rocks in more or less exposed places, where they can withdraw to partial shade if the heat becomes too great. It is in cool periods, therefore, that mountaineers need to exercise the most care in hiking or climbing steep grades or more precipitous rocks where the danger of placing a hand on a rattler, or of meeting one literally "face to face" is greatest.

There is but little danger in hiking over level ground, or up slopes on which the hands need not be used to assist, so long as the hiker has even an ordinary amount of clothing on the lower limbs. The usual height at which the strike lands, from level ground, is about ankle to army shoe-top height. Therefore, oxfords or low sneakers afford but little protection. Basketball shoes give a small measure of protection, army or other leather shoes of that height considerably more. Canvas leggings offer additional safety, while fourteen-inch boots are practically completely safe, and leather puttees are as so much armor plate where the rattler is concerned. Perhaps no better evidence of the comparative lack of danger from rattlers is needed than the impunity with which so many of our hikers go about in shorts or bathing suits. The writer, after living many years in rattlesnake territory without ever having been struck at, still prefers the feeling of safety which comes from the wearing of leather boots or shoes.

Many are the stories which go the rounds as to these (and other) reptiles crawling into campers' beds, occupied or unoccupied, but this writer has yet to authenticate any such case, and he has spent many a night on the ground in the country of the rattlesnake. A friend who was a member of a Sierra Club annual outing some years ago tells of a rattlesnake being found in boughs placed beneath the bed of certain members of the party. Happily, such cases must be

(Continued on Next Page)

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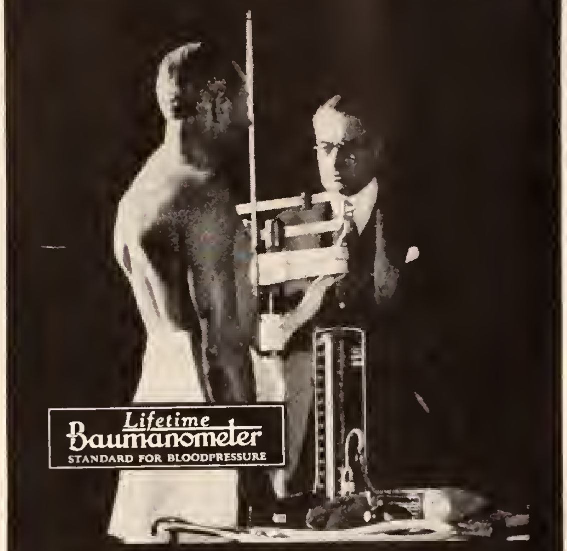

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(Continued from Preceding Page)

rare. If perchance you have heard that a horsehair rope placed on the ground so as to encircle the bed is a protection against rattlers, you may as well know that it is futile. A rattlesnake will crawl right over such a barrier—and why not? It can crawl with impunity across a barrier of cactus.

Rattlesnakes are often found at rest in a nice, neat coil, and so are popularly reported to have been "coiled to strike." That this is far from the truth may be readily demonstrated if only a little calm observation is made to replace hysteria. Disturb one rudely and the first thing it does is to rapidly unloose these coils, quickly assuming a posture which will be readily recognized as a fighting pose. If really angry or excited, the anterior one-third of the body is reared somewhat above the ground and bent into sharp but graceful curves like a letter "S," or a succession of them—that each bend is in the opposite direction from the one before or behind. If reared high, and very threatening, the head and neck may be tilted downward again from a higher curve farther back. The tongue plays in and out, and the rattle sounds a once-heard-never-forgotten buzz. The rattle may be within the curves and loops, or readily visible somewhere outside them. The posterior two-thirds of the body will be seen to be in coils or loops forming a firm base of support from which to launch the strike. A short stroke can be quickly made from almost any position by drawing the head back a bit, but the longest and most effective strike is doubtless that from the position described.

Now, a rattlesnake can not leap, and can not strike its own length. Its most effective stroke is the shortest, both the power that goes into it and the accuracy of aim diminishing with distance. One-third of its own length is about the greatest reasonably effective range, and certainly beyond half its length lies safety. Therefore you do not need a "ten-foot pole" with which to kill, or experiment with, a rattler.

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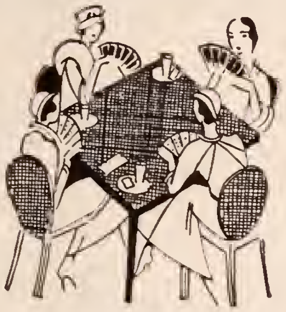
In a recent story in a popular weekly magazine a well-known writer drew for his readers a word-picture of a vicious brute of a rattlesnake, coiled ready for action, its head swinging from side to side, mouth wide open, and hissing venomously. In fact (and the writer hopes the reader will verify this at the next opportunity), the head swings only so much as is necessary to keep a watchful eye on the moving object which engages its attention. The rattlesnake never opens its mouth before launching the strike and the writer has never heard this kind of snake hiss. Of course, the hero of the story "blew off" the head of this dragon with his trusty six-shooter in spite of its active movements.

The "bite" of the rattlesnake is a combination of acts which takes place with astonishing speed, often too fast for the eye to follow. As the head moves forward the mouth is opened widely, an action which erects the fangs from their resting position against the roof of the mouth so that they point forward. The jaws are capable of opening until the lower jaw almost forms a line with the upper, instead of an acute or even obtuse angle. The forward-pointing fangs thus literally stab the victim, and are partially imbedded if the aim be accurate. A convulsive closing movement or "bite" instantly follows, and is, usually, as quickly released. But this biting movement compresses by muscular action the venom glands of the upper jaw, and portions of venom pass along the ducts to the bases of the hollow fangs and through the fangs into the wound, exactly as a hypodermic injection is made. Nature gave the rattlesnake a hypodermic needle long before man invented it. Removal of the fangs renders a rattlesnake comparatively harmless, but only temporarily. New fangs in a short time move into position to replace those extracted, a provision of nature to care for the losses which normally occur in striking prey. There is no method of removal of the poison glands. To take them out by an operation would nearly destroy the sides of the head.



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III. VITAMIN A

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That vitamin A exerts an influence on the growth of human infants and children is also generally accepted.

As early as 1919, a relationship between vitamin A in plant foods and plant pigments was postulated. Research since that date has indicated that beta-carotene and some related compounds may be considered as provitamin A (3).

The vitamin A potency of fruits and vegetables is apparently due to their carotene content, since vitamin A as such has never been found in plant tissue. Ingested carotene is believed to be converted into vitamin A by enzyme action in the liver of the animal (4), in which organ the vitamin is stored.

Vitamin A in the form of carotene may be present in yellow, green or red pigmented fruits and vegetables—in the two latter cases, the yellow color of carotene being masked by other pigments present. Color alone, therefore, is not always a reliable index of potential vitamin A potency.

Both vitamin A and carotene are relatively stable to heat but are subject to destruction by oxidation. However, foods of both animal and plant origin, when canned by modern methods, have been found to retain their vitamin A potencies in high degree (5).

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(1) 1927. J. Exp. Med., *46*, 699
(2) 1935. J. Nutrition, *9*, 735
(3) 1929. Biochem. J., 23, 803
(4) 1931. J. Biol. Chem., *94*, 185
(5) a. 1933. J. Am. Diet. Assoc., *9*, 295
b. 1931. J. Nutrition, *4*, 267
c. 1935. Am. J. Pub. Health, 25, 1340
(6) a. 1925. Ind. Eng. Chem., *17*, 69
b. 1926. Ind. Eng. Chem., *18*, 85

This is the sixteenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

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T. Henshaw Kelly	San Francisco	1937
Karl L. Schaupp (Chairman)	San Francisco	1937

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William J. Kerr (Chairman)	San Francisco	1938
William H. Geistweit	San Diego	1939

Committee on Health and Public Instruction

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Fred B. Clarke (Chairman)	Long Beach	1938
W. R. P. Clark	San Francisco	1939

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J. Marion Read	San Francisco	1939

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Editor ex officio

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Mott H. Arnold	San Diego	1939

Committee on Medical Defense

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Fred R. De Lappe	Modesto	1939

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William R. Molony, Sr.	Los Angeles	1939

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B. O. Raulston	Los Angeles	1938
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Daniel Crosby	Chair., Com. on Hospitals, Dispensaries, Clinics
Morton R. Gibbons	Chair., Com. on Industrial Practice
E. Vincent Askey	Chair., Com. on Membership and Organization
John H. Graves	Chair., Com. on Medical Economics
Junius B. Harris	Chair., Com. on Public Policy and Legislation
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Frederick C. Warnshuis	Secretary-Treasurer

Communications for the Public Relations Department should be addressed to the Director, Frederick C. Warnshuis, M. D., Room 2004, 450 Sutter Street, San Francisco.

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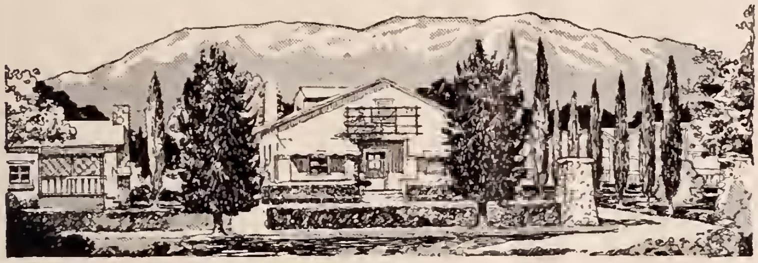
Henry J. Ullmann	Santa Barbara	1939
Clarence G. Toland	Los Angeles	1939

Communications for the Cancer Commission should be addressed to the secretary, A. R. Kilgore, M. D., Room 2004, 450 Sutter Street, San Francisco.

(Roster lists of officers of scientific sections, component county societies, Woman's Auxiliary, A. M. A. delegates, special committees, etc., are continued on advertising pages 4 and 6.)



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Secretary, L. A. Wing, Eureka.

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Secretary, Merritt C. Canfield, 204 Professional Building, El Centro.

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Secretary, Stanley H. Mentzer, 2180 Washington Street, San Francisco.

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Secretary, George H. Rohrbacher, Medico-Dental Building, Stockton.

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Secretary, E. D. Anderson, 1120 Morro Street, San Luis Obispo.

(Roster lists continued on advertising page 6)

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Secretary, J. Garwood Bridgman, 205 Third Avenue, San Mateo.

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Secretary, William H. Eaton, Health Department, Santa Barbara.

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Assistant Secretary, Daniel Bilker, Medico-Dental Building, San Jose.

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The Institutions here listed have announcements in this issue of CALIFORNIA AND WESTERN MEDICINE. For Index, see advertising page 8.

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For Treatment of Tuberculosis
San Jose, California

CALIFORNIA SANITARIUM

For Treatment of Tuberculosis
Belmont, California

CANYON SANATORIUM

For the Treatment of Tuberculosis
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For the Treatment of Tuberculosis
Colfax, California

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FRANKLIN HOSPITAL

Limited General Hospital
Fourteenth and Noe Streets, San Francisco

FRENCH HOSPITAL

General Hospital
Geary at Fifth Avenue, San Francisco

GREENS' EYE HOSPITAL

Consultation, Diagnosis and Treatment of Diseases of the Eye
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LAS ENCINAS SANITARIUM

Nervous and General Diseases
Las Encinas, Pasadena, California

LIVERMORE SANITARIUM

Nervous and General Diseases
Livermore, California

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For Treatment of Tuberculosis
Los Gatos, California

POTTENGER SANATORIUM AND CLINIC

For the Treatment of Tuberculosis
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Mental and Nervous, Alcoholic and Drug Addictions
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Treatment of Tuberculosis
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Limited General Hospital
Bush and Hyde Streets, San Francisco

ST. LUKE'S HOSPITAL

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Test Orange and Tomato Juice for Their Vitamin C Value (by Bureau of Home Economics, United States Department of Agriculture, Washington).—Orange juice contains from two to three times as much vitamin C as tomato juice. Either of the juices lose vitamin C if allowed to stand before using. These results are announced by workers in the Bureau of Home Economics, United States Department of Agriculture, in an article published on September 5 in the *Journal of Home Economics*. The Bureau points out, however, that when tomato prices are much lower than orange prices, it may be possible to get as much or more vitamin C protection per dollar from tomatoes.

The tests included both chemical analysis and feeding trials of four varieties of oranges, two from California and two from Florida—fresh pressed juice of tomatoes and juice from a brand of commercial canned tomatoes. The juice of the California Navel oranges was slightly richer than the others, but some of the others were enough juicier so that the juice from a fruit of equal size gave as good or better protection. To obtain the same protection from tomato juice it would be necessary to give two or three times as much juice.

The investigators, Esther Peterson Daniel, Mary H. Kennedy, and Hazel E. Munsell, found that the canned tomatoes which they tested contained as much vitamin C as the fresh sample. These tomatoes were grown in different section of the country and, since there is a loss of vitamin C in canning, these results raise the question of the effect of soil and climate upon the amount of vitamin C formed in the plant.

The common household custom of squeezing orange juice at night to serve at breakfast causes a loss of 10 per cent or more of its vitamin C value, even though it stands covered in a refrigerator. Tomato juice from fresh or canned tomatoes also deteriorates when allowed to stand exposed to the air. This may amount to as much as a 40 per cent loss if the juice stands for several days.

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The pleasures of the senses pass quickly; those of the heart become sorrows; but those of the mind are with us even to the end of our journey.—Spanish Proverb.

In the nature of things youth cannot be aware of its latent powers.—Leon J. Richardson.

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BOOK REVIEWS

Books received for review are placed in the Library of the California Medical Association, in its central office at San Francisco. Book reviews are written by the Association Secretary.

BOOKS RECEIVED

An Introduction to Materia Medica and Pharmacology. By Hugh Alister McGuigan, Ph. D., M. D., Professor of Materia Medica, Pharmacology and Therapeutics, University of Illinois, College of Medicine, Chicago, and Edith P. Brodie, A. B., R. N., Formerly Director, School of Nursing, Vanderbilt University, Nashville, Tennessee; Formerly Instructor in Materia Medica and Therapeutics, Washington University School of Nursing, St. Louis, Missouri. Cloth. Pp. 580, with 71 text illustrations and 18 color plates. Price, $2.75. St. Louis: The C. V. Mosby Company, 1936.

Microbiology and Pathology for Nurses. By Charles F. Carter, B. S., M. D., Director, Carter's Clinical Laboratory, Dallas, Texas; Formerly Director of Laboratories, Parkland Hospital, Dallas, Texas, and Lecturer in Bacteriology and Pathology, Parkland Hospital School of Nursing. Cloth. Pp. 682, with 138 text illustrations and 14 in color plates. Price, $3. St. Louis: The C. V. Mosby Company, 1936.

Medicine and Mankind. Introduction by Eugene H. Pool, M. D., President, New York Academy of Medicine. Lectures to the Laity Delivered at the New York Academy of Medicine. Edited by Iago Galdston, M. D. Cloth. Pp. 217. Price, $2.00. New York: D. Appleton-Century Company, Inc., 1936.

A Textbook of Pathology. By W. G. MacCallum, Professor of Pathology and Bacteriology, The Johns Hopkins University, Baltimore. Sixth edition, entirely reset. Cloth. Pp. 1277, with 697 illustrations. Price, $10 net. Philadelphia: W. B. Saunders Company, 1936.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest. By leading members of the medical profession throughout the world. Edited by Louis Hamman, M. D., Visiting Physician, Johns Hopkins Hospital, Baltimore, Maryland. Volume III. Forty-Sixth Series, 1936. Cloth. Pp. 339. Philadelphia: J. B. Lippincott Company, 1936.

Principles of Chemistry. An Introductory Textbook of Inorganic, Organic, and Physiological Chemistry for Nurses and Students of Home Economics and Applied Chemistry with Laboratory Experiments. By Joseph H.

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Roe, Ph. D., Professor of Biochemistry, School of Medicine, George Washington University; Formerly Instructor in Chemistry, Central School of Nursing, Washington, D. C. Fourth Edition. Cloth. Pp. 475. Price, $2.75. St. Louis: The C. V. Mosby Company, 1936.

Surgical Clinics of North America. Issued serially, one number every other month. Volume 16, Number 3. New York Number, June, 1936. Cloth. Pp. 277, with 79 illustrations. Per Clinic year February, 1936, to December, 1936. Price, $16 net. Philadelphia: W. B. Saunders Company, 1936.

Fundamentals of Human Physiology. By the Late J. J. R. MacLeod, M. B., D. Sc., F. R. S., Late Regius Professor of Physiology in the University of Aberdeen, Scotland; Formerly Professor of Physiology in the University of Toronto, Toronto, Canada; Formerly Professor of Physiology, Western Reserve University, Cleveland, Ohio, and R. J. Seymour, M. S., M. D., Professor of Physiology, Ohio State University, Columbus, Ohio. Fourth Edition. Cloth. Pp. 424. Price, $2.50. St. Louis: The C. V. Mosby Company, 1936,

BOOK REVIEWS

A Textbook of Pathology. By W. G. MacCallum, Professor of Pathology and Bacteriology, The Johns Hopkins University, Baltimore. Sixth Edition, Entirely Reset. Pp. 1277, with 697 illustrations. Philadelphia and London: W. B. Saunders Company, 1936. Cloth. Price, $10 net.

Extraordinary advances have made it necessary to bring out a sixth edition of this text that has been an authority since 1916. Beginning with the idea that all departures from normal health are brought about by some harmful or disturbing agency, the author traces these changes back to their cause and then describes anatomical alter-

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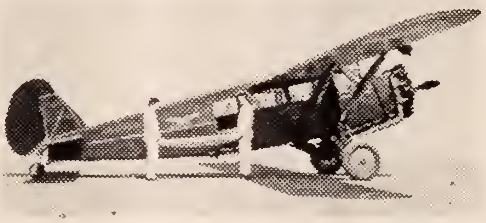

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The text and illustrations indicate the thoroughness of revision, and the stressing of etiology characterizes the author's individuality as a teacher and investigator in pathology and makes him a distinguished authority. This sixth revision brings this text to a prominent front rank in the literature on pathology. It follows that it merits a place in every medical library.

Microbiology and Pathology for Nurses. By Charles F. Carter, M. D., Dallas, Texas. Cloth. Pp. 628, illustrated. St. Louis: C. V. Mosby Company. Price, $3.

A satisfactory and sufficiently complete manual and reference text for nurses. Quite abreast of modern knowledge. Should be valuable in every library on nurse training.

An Introduction to Materia Medica and Pharmacology. By Hugh A. McGuigan, Ph. D., M. D., University of Illinois. Cloth. Pp. 580. St. Louis: C. V. Mosby Company. Price, $2.75.

True to its title and well arranged for student nurses. Well chosen illustrations with an understandable text.

Medicine and Mankind. Edited by I. Galdston, M.D. Cloth. Pp. 217. D. Appleton-Century Company. Price, $2.

The New York Academy of Medicine has for a long time recognized an important society responsibility to enlighten the public on questions of health and medicine. It not only recognizes, but accepts and discharges that responsibility by sponsoring a series of public meetings. These meetings are addressed by men capable, experienced and well-prepared to present scientific facts in a manner that the layman can understand. A splendid example meriting emulation.

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Aside from the excellence of these lectures they should serve as a model and stimulus to others to contribute in like manner to the education of the public.

Diabetic Manual: For Practitioners and Patients. By Edward L. Bortz, M. D., University of Pennsylvania. Cloth. Pp. 222. Illustrated. Philadelphia: F. A. Davis Company.

This manual conforms to other similar guides. It will be of assistance to every diabetic.

Tissue Immunity. By Reuben L. Kahn, D. Sc., University of Michigan. Cloth. Pp. 707. Illustrated. Baltimore: Charles C. Thomas.

This is a new text. The author requires no introduction, as he is known for his research work and the Kahn test in syphilis.

This volume presents quantitative studies on tissue immunity and correlates the results of these studies in the clinic. Immunologists have made striking discoveries in the fields of humoral and cellular immunity. Tissue immunity has been vaguely understood. The experiments here imparted seem to indicate that tissue immunity is a defensive, and not a hypersensitive reaction.

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(Continued from Text Page 376)

logical therapeutics, an agent which possesses many of the virtues of the older remedies, physical and otherwise, without many of their disadvantages; I refer to refrigeration. . . .

From an article on "Mistakes in Medical Education" by Dudley Tait, San Francisco.

It affords me sincere pleasure to express publicly my admiration for the highmindedness that has characterized the conduct of the Oakland College of Medicine, its strict adherence to absolute honesty in the face of temptation, its loyalty to sound principles, and above all, its freedom from the taint of commercialism. . . .

The faculty should find both hope and encouragement in the knowledge that the State University was born in Oakland, under the name of California College, at the corner of Fourteenth and Webster streets. . . .

From an article on "Report of Dermatological Cases Caused by a Proprietary Hair Dye" by J. Cameron Pickett, M.D., San Francisco.

I herewith submit a report of some interesting cases of dermatitis venenata, caused by the use of a proprietary hair dye, which have recently come under my observation, as illustrating some of its special phases. . . .

From an article on "Report of the Committee for the Study of Anterior Poliomyelitis in San Francisco During 1910" by E. C. Fleischner, M.D., San Francisco.

In July, 1910, a committee, composed of Doctors M. B. Lennon, R. L. Ash, W. F. McNutt, Jr., E. Smith, G. J. McChesney and E. C. Fleischner, was appointed by Dr.

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Langley Porter, the president of the society, to study and gather data on the epidemic of poliomyelitis which at that time seemed to be prevailing in San Francisco. . . .

Conclusions.—1. San Francisco has unquestionably been the seat of an epidemic of anterior poliomyelitis from October, 1909, to October, 1910.

2. The cases ran typical clinical courses as they are ordinarily described for this disease.

3. The period of life most susceptible to this condition is between the ages of 1 and 6 years.

4. The summer months, May, June, July and August, represent the time of year that the disease is most potent.

5. Pain is a much more common symptom than was formerly described in the older textbooks.

6. It is regrettable that lumbar puncture and blood counts were done in so few cases. . . .

From an article on "Athletics and Sexual Neurasthenia" by Victor G. Vecki, M.D., San Francisco.

Man was neither born nor created to do hard work. In the Bible we are told that Adam did not feel like working until Eve felt that it was time to dress herself. . . .

Take, for instance, one of our newest sports, the automobiling. It certainly has become an actual menace. Talk about Abe Ruef, like other prisoners in San Quentin, losing their personality because of the ever present guns of the guards being trained on them! How can the San Francisco pedestrians keep their personality dodging the autocars speeding on crossings and dashing around corners? The long-suffering public could hardly be blamed should they feel some kind of satisfaction when learning that motorcar speeding causes sexual impotence. . . .

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(Continued on Page 17)

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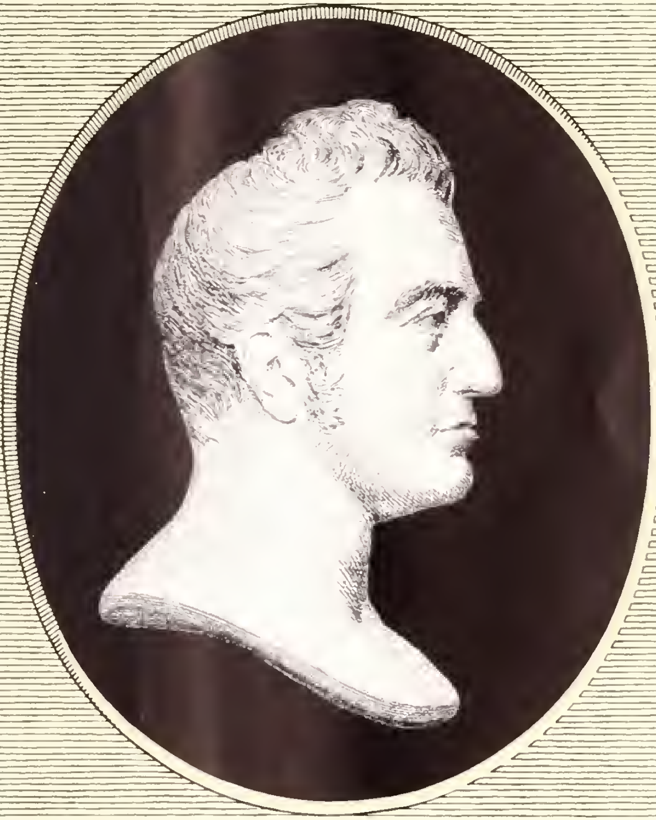

JOHN ABERCROMBIE 1780-1844

M. D. Oxford, Rector of Morischal College, Physician in Ordinary to His Majesty

Reproduced from the Collection of the Northwestern University Medical School
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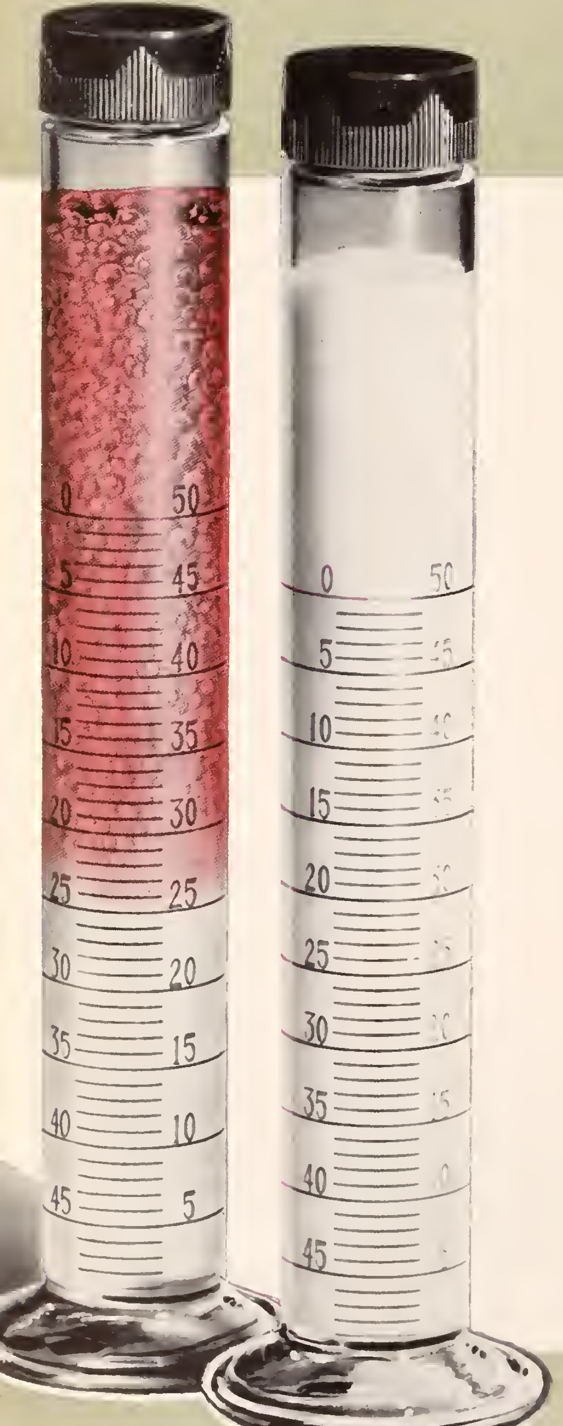
PRE·EMINENCE

John Abercrombie—1780-1844. An eminent Scotch physician. He was born at Aberdeen and graduated in medicine at Edinburgh in 1803. He practiced his profession in the Scottish Capital and soon became recognized as the first consulting physician in Scotland. Among the honors bestowed upon him were the degree of M.D. from Oxford, the rectorship of Morischal College, the vice-presidency of the Royal Society of Edinburgh, and the office of Physician in Ordinary to His Majesty for Scotland.

Petrolagar Laboratories, Inc., *through the cooperation of Northwestern University Medical School, will reproduce portraits of pioneers in the study of gastro-enterology from time to time. Additional copies of the portrait of John Abercrombie are available to members of the medical profession upon request. In like manner, other portraits will be available as they are published.*



Miscibility DEMONSTRATED

The two flasks here illustrated contain an equal amount of mineral oil. One is Petrolagar emulsion and water, the other is plain mineral oil (stained red) and water.

Although shaken vigorously, the plain oil and water separate immediately as shown in the accompanying photograph, whereas the oil in Petrolagar remains suspended. This demonstrates the miscibility of Petrolagar.

Since Petrolagar is miscible in water and mineral oil is not, it is obvious why Petrolagar readily mixes with the bowel contents. The oil, being in minute globules, has less tendency to leakage. Petrolagar promotes efficient, comfortable evacuation.

Petrolagar is a palatable emulsion of
re liquid petrolatum, (65% by volume)
d number One Silver White Kobe Agar-
ar, accepted by the Council on Pharmacy
d Chemistry of The American Medical
ssociation for treatment of constipation.

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All Owl Stores have modern and fully equipped pharmaceutical departments.

TWENTY-FIVE YEARS AGO

(Continued from Page 15)

done can never be injurious to the sexual organs nor to their functions. It is quite true that the rider must sit in his saddle upon that part of the body which is by nature upholstered and constructed for that purpose. . . .

Pacific Coast Oto-Opthological Society.—During the week of Professor Fouchs' course of lectures given at the Medical Department of Stanford University, the Pacific Coast Oto-Opthological Society effected a permanent association for the advancement of their specialty. . . .

Medical Defense.—Philip Mills Jones, Secretary, Medical Society of the State of California, San Francisco, California.

Dear Doctor: I wish to express my sincere thanks to the State Medical Society for the able way in which your attorneys, W. W. Kaufman and H. A. van C. Lorchiana, handled my defense in a malpractice suit brought against me for $20,450. The jury brought in a unanimous verdict in my favor on the first ballot. . . .

From the experience which I have had, I can assure any conscientious practitioner that he need have no fear of the final outcome of a suit defended by our State Society. I am certain I had much better service than any far-away insurance concern could have given.

Wishing you success in your good work, and with many thanks, I am,
Very truly yours,
H. B. CAREY.

August 12, 1911.

There are steps in education that can be taken only after one has gained some measure of experience.—Leon J. Richardson.

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Of Proved Value in . . . the Endotoxic Infections

Edwenil, the polyvalent antibacterial agent, while comparatively new, has already been used so extensively that it has won the place of a leader in the treatment of the endotoxic infections such as the respiratory diseases, boils, measles, etc.

It is a stable, colloidal, protein-free (by the Biuret Test) solution for intramuscular injection.

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Since 1933, two hospitals have used Hi-Pure continuously, with marked advantages from the clinical as well as the financial viewpoint.

We shall be glad to mail you our new booklet giving clinical details of this gas. Please address 211 Bay Street, San Francisco.

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BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 376)

County medical societies would be asked to set up a voluntary health insurance system, providing a list of doctors and hospitals from which members might select and handling the division of fees, without interference from laymen, Mr. Shapiro said." (San Francisco *News*, August 24, 1936.)

In a report on drug addiction in California by the Senate Interim Narcotic Committee, composed of Senators Sanborn, Young and Jack D. Metzger, is published some very interesting information. On page 38 is a commendation of the California State Board of Medical Examiners for its activity in supporting narcotic enforcement, which closes with the following sentence: "No State Bureau is freer from political domination or has a higher ideal of service to the public than the California State Board of Medical Examiners." Commenting on the lack of activity of other State Medical Boards, the statement is made: "In the judgment of your Senate Narcotic Committee, the various State Medical Boards which have failed to act, thus permitting 334 addict doctors to continue to practice (in states other than California) at the expense of the health and lives of their patients, are traitors not only to their state government but the members of their profession, whom they are appointed to represent." Copies of this report may be obtained from the Bureau of Publications, State Capitol, Sacramento.

"The University of California Medical School had a new dean today, Dr. William McKim Marriott, noted pediatrician, recently of St. George Children's Hospital in St. Louis. . . . No changes are contemplated in the administrative policies of the retiring dean, Dr. Langley Porter, said Doctor Marriott." (San Francisco *Call-Bulletin*, July 15, 1936.)

Solicitors on the streets of San Francisco have recently been distributing cards which purport to "type" the individual as to his glandular activity. The cards have been handed to women, with a check mark showing that they have been "typed" by a so-called "endocrinologist" as suffering from hypo- and hyperactivity of certain glands. The recipient of the card is requested to return said card in an accompanying envelope to the "Endocrinology Society of America," Shreve Building, San Francisco, together with 25 cents, and in return would receive a form letter, giving practically no scientific information for the money. The investigation department of the Board of Medical Examiners learned that the "Endocrinology Society of America" was a visionary organization in the form of a trade name; that the idea was suggested by an article printed in the May, 1936, issue of *Esquire*, and a succeeding issue written by George Antheil, about whom appears no information as to scientific training which would warrant the author's acceptance as an authority on endocrinology. The promoters of this Endocrinology Society of America were advised to discontinue their present method of procedure.

"A jury at a coroner's inquest held at the Powell Mortuary this afternoon rendered a verdict to the effect that Hazel C. Scott, forty-two years of age, of 29 North

(Continued on Page 21)

●

VITAMINS IN CANNED FOODS

IV. VITAMIN B_1

● The story of vitamin B_1 is quite long and involved. Properly, it has been fully covered at some length in authoritative dissertations on the vitamins (1).

The original vitamin B of Eijkman and of Funk, while definitely possessed of antineuritic potency, is now known to be of a complex nature. Between 1919 and 1926, the vitamin B complex was resolved into vitamins B (B_1) and G (B_2). Subsequent work has indicated the existence of other vitamins in the complex, whose chemical natures or relations to human nutrition are not as yet clearly understood.

As a direct result of many researches on vitamin concentrates, the chemical identity of the crystalline antineuritic factor has recently been described as a derivative of 6-aminopyrimidine (2).

It has been known for many years that vitamin B_1 may be destroyed by heat. In the canning procedure, a number of heat treatments of food may be involved, especially in the thermal "processing" of the product to insure its preservation. In the "process", many foods are subjected to a heat treatment after sealing in the can, to destroy spoilage organisms which may be present on the raw material. In other cases, the food is filled into the cans at a sufficiently high temperature to obtain the same result. Therefore, the question of the effect of the canning procedures on vitamin B_1 frequently arises.

The times and temperatures necessary for the processing of canned foods are governed by a number of factors, important among them being the pH of the food itself. Highly acid foods require only short heat processes at the temperature of hot or boiling water to destroy spoilage organisms. The so-called "non-acid" or "semi-acid" products require higher temperatures — usually 240° F. (116° C.).

As might be expected, acid foods have been found to suffer only a slight loss of vitamin B during canning (3).

The degree of retention of vitamin B_1 in the non-acid foods is not as high as in the acid foods. (4).

This is partly due to the heat treatments accorded them and possibly also to their low acidity, since the vitamin is more stable in acid media.

The facts in the case may be summarized briefly by the statement that commercially canned foods may be depended upon to supply vitamin B to extents consistent with the amounts of the vitamin originally present in the raw materials from which they were prepared. Because of their widespread use, canned foods contribute a notable amount of vitamin B_1 to the American dietary.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

(1) Vitamins: A Survey of Present Knowledge Medical Research Council, Special Report Series, No. 167, 1932. His Majesty's Stationery Office, London

The Vitamins H. C. Sherman and S. L. Smith 1931 Am. Chem. Soc. Monograph, 2nd Edition

(2) 1935. J. Amer. Chem. Soc. 57, 1751

(3) 1932. Ind. Eng. Chem. 24, 457

(4) 1932. J. Nutrition 5, 307

This is the seventeenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Council on Foods of the American Medical Association.

Dull the consciousness *of* PHYSICAL DISCOMFORT

SLEEP in the normal healthy person provides an adequate period of physical and mental recuperation. Where normal sleep is disturbed by worry, excitement, pain or physical discomfort, hypnotics or sedatives are often indicated.

Ipral Calcium (calcium ethylisopropylbarbiturate) induces a sound, restful sleep closely resembling the normal. It is readily absorbed and rapidly eliminated. Undesirable cumulative effect may be avoided by proper regulation of the dosage. No untoward organic or systemic effects have been reported in the usual therapeutic dosage.

Ipral Calcium is supplied in 2-gr. tablets for use as a sedative and hypnotic.

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When pain accompanies insomnia, Tablets Ipral Aminopyrine (2 gr. Ipral, 2.33 gr. Aminopyrine Squibb) provide both analgesic and sedative effects.

These preparations are available in bottles of 10, 100 and 1000 tablets. For descriptive literature address the Professional Service Department, 745 Fifth Avenue, New York City.

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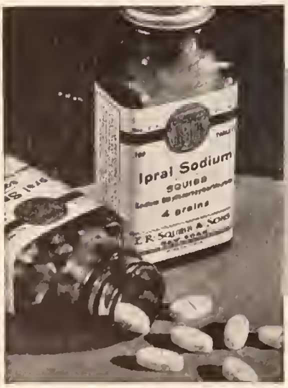

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NO COLLECTION NO CHARGE
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BOARD OF MEDICAL EXAMINERS

(Continued from Page 18)

Tujunga Avenue, who passed away last week at the General Hospital, died from septicemia, following an abortion performed by Regina Herschel, 2425 Larissa Drive, Hollywood. The verdict included a recommendation that Mrs. Herschel be held to answer in the case. . . ." (Burbank *Review,* September 2, 1936.)

"Dr. James Beggs, forty-six, was arrested in Oakland yesterday on a telegraphic warrant from Los Angeles on charges of conspiracy in connection with an asserted coast-wide illegal operations ring. Doctor Beggs was one of seventeen persons recently indicted here. He had been scheduled to surrender in court last August 31, when most of the other defendants were arraigned and their trial set for next October 1. Trial of the illegal operations ring suspect was set for October 1 after Deputy District Attorney Vernon Ferguson communicated with San Francisco authorities and learned they had no objection to the Los Angeles trial preceding a similar trial there. Many of the seventeen under indictment here also face charges October 14 in San Francisco." (Los Angeles *Illustrated Daily News,* September 10. 1936.)

"Still another Lindsay case came Judge Piepenburg's way when Paul Doroash, Lindsay chiropractor, charged in Lindsay with violation of the State Chiropractors' Act, pleaded prejudice in the Lindsay court and won a change of venue to Exeter. Doroash was charged by George E. Swanson, a Lindsay man, with having a sign on his office door which might be interpreted as that of a doctor of medicine." (Exeter *Sun,* August 6, 1936.)

"Prosecution of Dr. Malcolm E. Hoffman on a charge of performing an illegal operation ended suddenly at the

(Continued on Next Page)

Cocomalt
A DELICIOUS FOOD DRINK
CHOCOLATE FLAVOR

IRON · CALCIUM
PHOSPHORUS
VITAMIN D

in this one delicious high caloric food-drink

During convalescence from illness, an operation or childbirth—or when it is advisable to increase the weight of a malnourished child—*there is one food-drink which has proved itself exceptionally useful.*

That food-drink is Cocomalt. Delicious and tempting, easily digested and quickly assimilated—Cocomalt not only adds easily assimilated Iron to the diet, but also richly provides Calcium, Phosphorus and Vitamin D.

An ounce of Cocomalt (which is the amount used to make one cup or glass) supplies 5 milligrams of Iron in easily assimilated form. Thus three cups or glasses of Cocomalt a day supply 15 milligrams—*which is the amount of Iron recognized as the normal daily nutritional requirement.*

Here, then, is one form in which even a capricious child or a finicky adult will take Iron willingly—and at the same time receive other important food essentials. Prepared as directed, Cocomalt adds 70% more food-energy value to a glass of milk.

Vitamin D, Calcium, Phosphorus

Cocomalt is fortified with Vitamin D under license granted by the Wisconsin Alumni Research Foundation. Each ounce of Cocomalt contains not less than 81 U.S.P. Vitamin D units.

Cocomalt also has a rich Calcium and Phosphorous content. Each cup or glass of Cocomalt in milk provides .32 gram of Calcium and .28 gram of Phosphorus. Thus Cocomalt supplies in good biological ratio three food essentials required for proper growth and development of bones and teeth: Calcium, Phosphorus and Vitamin D.

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Please send me a trial-size can of Cocomalt without charge.
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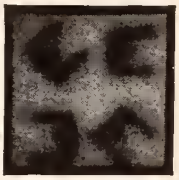

Your Patients Should Know the Difference!

Last year 20,000,000 Americans took the glare problem in their own hands. With the help of drug store clerks, garage mechanics and road stand vendors, they selected sun glasses intended to relieve their eyes from glare. Because they didn't know the difference, what they actually bought were glasses harmful to their eyes.

Sun glasses are available with two kinds of lenses. Coquille or micoquille lenses (used in the cheap sun glasses) which are unsafe for your eyes, and optically ground and polished lenses (used in the better sun glasses) which are safe for your eyes. Although there is very little apparent difference between these two types of lenses, coquille lenses are usually defective. Proof is the photograph (left) of an image cast by a coquille goggle lens. Defects which cause such distortion in a photograph can cause untold damage to eyes. Compare this with the sharp clear image (right) cast by an optically ground and polished lens. Ground and polished lenses cut down glare without impairing eyesight in any way.

To be sure of safe sun protection, we recommend the prescription of Soft-Lite or Anti-Glare Lenses (neutral glare filters) or auxiliary slip-overs or sun glasses with ground and polished lenses.

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

Hall of Justice yesterday when the 'star' witness against him proved a bulwark of his defense by giving testimony which brought an immediate dismissal. . . . Alice Rivas, nurse, also was absolved of similar charges." (San Francisco *Chronicle*, August 11, 1936.) "An assault on Margaret E. Hecker, twenty-seven-year-old nurse, last week and subsequent arrest of Dr. Malcolm E. Hoffman was termed 'just a misunderstanding' yesterday by the principals, after admitting they had dined and danced together at a peace parley. . . . Refusing to comment last night, Doctor Hoffman said: 'Yes, it has just been a misunderstanding. Our attorneys are trying to settle the whole thing out of court.'" (San Francisco *Chronicle*, August 15, 1936.)

"Thomas Flint, 33, former CCC doctor in the Redding district, and an unwilling principal in an escape from officers on the Redwood Highway seven months ago, will be taken to San Benito County today. It was understood that he is wanted in the southern county on a narcotics charge. Sheriff Hubler, whose teletype message to Redding resulted in Doctor Flint's arrest, sent word Tuesday that he would arrive early this morning to get the prisoner. After leaving the CCC here, Doctor Flint was arrested in the central part of the State on an Oregon check charge. While he and other prisoners were being transported north by stage, a Negro, to whom Doctor Flint was handcuffed, fled from the officers, compelling the physician to accompany him. The Negro later filed the handcuffs and Doctor Flint returned to surrender to the officers." (Redding *Searchlight*, August 19, 1936.)

"Dr. Louis W. Schreiber, 43, Santa Monica physician of 476 Twentieth Street, was lodged in the city jail Saturday night and charged with drunk driving, following an accident which resulted in serious injuries to Paul Jordan, 1677 Ocean Avenue, police reported. Witnesses said that Doctor Schreiber, driving at an excessive speed, failed to make the boulevard stop at the corner of Twentieth Street and Broadway and as a result crashed into the car driven by Jordan, according to police. Taken to police headquarters, Doctor Schreiber was examined by Dr. Rodney Snow, police surgeon, who reported that the man was under the influence of intoxicating liquor. Bail was set at $1,000. Schreiber was booked on a charge of violating section 501 of the Vehicle Code, a felony. According to police, Doctor Schreiber was committed to the psycopathic ward of the General Hospital for observation last month, following his arrest here on a charge of disturbing the peace." (Santa Monica *Topics*, August 24, 1936.)

"Dr. George E. Watts, who is under indictment at Los Angeles on charges of having performed illegal surgery, yesterday was cited to appear before the State Board of Medical Examiners in Sacramento to show cause why his license should not be revoked. The physician's indictment, the Associated Press reported, followed a state-wide investigation, in which thirty-one persons were indicted in San Francisco and a lesser number at Los Angeles." (Sacramento *Union*, September 6, 1936.)

"The National Association of Chiropodists today elected Dr. G. Earle Whitten of Oakland, California, president." (Associated Press dispatch, dated New York, September 8, printed San Francisco *Chronicle*, September 9, 1936.)

"The declining use of herbs in curing ills is worrying the older Chinese. So worried are they that they called a conference. To the accompaniment of fireworks barrage they discussed ways of inducing youthful Chinese to

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use the time-honored herb doctor's prescriptions. Several hundred Chinese, who met with Wong Goon Dick and L. T. Foon of the Chinese Consul General's office, agreed that modern medicine was all right, but they insisted that herbs would cure just as well." (Associated Press dispatch, dated San Francisco, August 17, printed Long Beach *Press-Telegram,* August 17, 1936.)

"The good men do lives after them," said the poet, but it won Dr. S. N. Chernyh probation on a narcotics charge. Tirelessly, Doctor Chernyh, as army physician, had administered to a battalion of the Russian White Army stricken with typhoid. Despite zero weather and lack of medical supplies, he worked night and day, and now 64, he had been arrested for selling narcotics here, but to his aid came survivors of the typhoid epidemic of the White Army. They told of his unselfish work, his kindness, how he could not bear to see anyone suffer, so Federal Judge Michael Roche placed him on three years' probation." (San Francisco *News,* August 24, 1936.)

"Dr. Clair Wilson today lost a $20,500 judgment when the District Court of Appeal reversed an order of the Superior Court for that amount. Doctor Wilson sued his former friend, Dr. George Anthony Zorb, for $255,000 damages as the result of an accidental shooting. Doctor Wilson was wounded by a pistol held by Doctor Zorb February 26, 1933, and he charged that Doctor Zorb had been negligent and careless in handling the weapon, although no criminal intent was alleged. . . ." Los Angeles *Herald-Express,* July 17, 1936.) (Previous entry, April, 1933, and July, 1934.)

"Pleading guilty to a charge of practicing medicine without a license, Grover C. Talbott, chiropractor of 14 East San Fernando Street, was fined $500 by Justice Grandin H. Miller yesterday. Talbott had pleaded not guilty to the charge and his trial scheduled for 10 o'clock yesterday morning, but withdrew his plea of not guilty and pleaded guilty when he appeared before Judge Miller with his attorney, Duncan Oneal. Talbott was arrested by Harry G. Henderson, special agent of the State Board of Medical Examiners, and Deputy Constable Tony Nave on June 1 on complaint of Mrs. Rose Torreto, 391 East Empire Street. . . ." (San Jose *Mercury-Herald,* July 16, 1936.)

"A plea of guilty to a charge of illegal sale of narcotics made yesterday by Dr. Harvey Johnson (James Harvey Johnston), 64, was refused by Municipal Judge Frank Dunn. On account of the seriousness of the charge and

(Continued on Page 26)

A FEW CONTRIBUTIONS TO THE

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ADRENALIN
The First Commercial Epinephrine

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VOLUNTARILY, we market only Council-Accepted products because we have faith in the principles for which the Council on Pharmacy and Chemistry (and the Council on Foods) stand.

We have witnessed the three decades during which the Council has brought order out of chaos in the pharmaceutical field. For over thirty years it has stood—alone and unafraid—between the medical profession and unprincipled makers of proprietary preparations.

The Council verifies the composition and analysis of products, and substantiates the claims of manufacturers. By standardizing nomenclature and disapproving therapeutically suggestive trade names, it discourages shotgun therapy and self-medication. It is the only body representing the medical profession that checks inaccurate and unwarranted claims on circulars and advertising as well as on packages and labels.

The Council, through N. N. R. and in other ways, augments the work of the U. S. Pharmacopoeia, testing and evaluating scores of new products which appear during the 10-year interim between Pharmacopoeial revisions.

We are conscious of the fact that the Council has at times been criticized both in and out of the medical profession. We hold no brief for perfection in any human agency. But we subscribe to the fact that the work of the Council is sound in principle; and in this high-pressure day and age, we shudder to think of a return to the unrestrained patent-medicine-quack-nostrum conditions of three decades ago, when there was chaos instead of Council.

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 23)

because Doctor Johnson was not represented by counsel, Judge Dunn postponed the case until Wednesday. Doctor Johnson was arrested by State Narcotic Inspector Clyde Carpenter. The agent said that after repeated warnings he had sent an under-cover operator to Doctor Johnson's office at 988 Market Street. The man had purchased twenty one-quarter-grain tablets of morphin, which cost the doctor 35 cents, for $10, said Carpenter." (San Francisco *Examiner,* July 21, 1936.)

"Dr. Samuel Twain, 35, physician with offices at 1799 University Avenue, was sentenced to pay a fine of $500 or spend 250 days in jail today by Police Judge Oliver Youngs, after a jury found him guilty last Saturday on ten counts of failing to keep records of narcotic prescriptions issued by him for the prescribed two-year period. Twain indicated that he would pay the fine in $25 installments each month, which Judge Youngs said would be satisfactory. Doctor Twain was arrested last December and acquitted in the court of Superior Judge Frank M. Ogden of Oakland of two additional charges of violation of the state narcotics law. He had been accused of using the names of fictitious patients." (Oakland *Tribune,* July 16, 1933.)

"Denying that he performed an illegal operation on a girl in 1934 (1936), Dr. William B. MacCracken, Berkeley physician and surgeon, today sought a writ of review in the Superior Court on the action of the State Medical Board in revoking his license to practice. . . . On July 8, 1934 (1936), the accusation charging that Doctor MacCracken performed the operation was filed with the State Medical Board by Harry G. Henderson and Officer Ralph Pidgeon of the Berkeley police. On July 13, 1936, the examiners revoked Doctor MacCracken's license to practice." (Press dispatch dated San Francisco, July 17, 1936, printed Oakland *Tribune,* July 17, 1936.)

"The San Francisco police gave aid to San Diego authorities yesterday in the questioning of two women arrested in the southern city on charges of performing illegal operations. Deputy District Attorney John McMahon of San Francisco and a police inspector assisted District Attorney Thomas Whalen in his investigation, according to the Associated Press, after Mrs. Laura Miner, 37, and Mrs. Nedra Cordon, 27, were taken into custody. Bail for the two, first set at $5,000, was reduced to $500, with the consent of Whalen, 'in view of their coöperation.' Preliminary hearing on charges was set for August 3." (San Francisco *Examiner,* July 19, 1936.)

"Action against alleged members of a coast-wide illegal operation ring moved forward in San Francisco and San Diego yesterday. At San Diego dispatches said the statewide probe took a new turn when Attorney Edgar B. Hervey, counsel for two women, jailed after a spectacular raid, declared that his clients were blackmail victims of the coast ring. Hervey was quoted as saying the ringleaders 'horned in' on the San Diego field by shadowing those involved, securing information about their activities and then threatening them with exposure, prosecution and prison unless they agreed to use the syndicate's name and pay $1,000 a month. . . ." (San Francisco *Examiner,* July 18, 1936.)

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Medical Quacks Leave Trail of Woe Behind.—Investigations into the activities of a ring of medical quacks operating in California reveal that a Sacramento family was bilked out of $10,000 for alleged expert eye treatment. The tribute exacted by this gang of "con" men will reach $100,000 in the State, it is believed.

That such swindles could be perpetrated in this enlightened age seems almost unbelievable, but the medical quacks are clever—they have to be. Their stock in trade consists of big words and bigger promises. They flourish because of the laity's awe of medical science and because they have a glib line of sales talk. They do not often make a strike, but when they do they make it count.

Medical ethics exists for the purpose of preventing such tragedies as this. Ethical physicians and surgeons do not go about drumming up practice. Yet in spite of the best efforts of state boards and professional associations to safeguard the public through standardized methods of practice, a quack will occasionally break through the lines and take a patient for his bankroll. Often these quacks have no medical training whatsoever. In some instances they are doctors who have been blacklisted by the profession.

The only safe rule is to call in the doctor you know, the doctor who has an unblemished reputation in the community. Beware of traveling bands of alleged healers who claim to have something the ethical practitioners lack. The quacks are after nothing but the patient's money, and they will get that sooner or later.—*Sacramento Union.*

The key to the world of the future and to the wise fraternity of all races lies in the liberation of the child from the bondage of others' error and sin; from disease and debility, from desertion and want, from ignorance and passion above all, that are visited on the helpless to the third and fourth generation. The heart of a child is friendly to all; like the baby of Della Robbia its limbs are bound, but its arms go out to its fellows. Its single claim is to be allowed to love; its one revenge to die if, for an hour, we neglect it.—Romain Rolland.

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★ *Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245*
Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154
N. Y. State Jour. Med., June 1935, Vol. 35, No. 11
Arch. Otolaryngology, Mar. 1936, Vol. 23, No. 3, 306-309

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I hereby give and bequeath unto Trustees Of The California Medical Association, a nonprofit corporation of California, the sum of $——— to be known as the ——— Gift, to be used and expended by said corporation for scientific, educational, or hospital purposes.

* * *

FORM OF CLAUSE OF WILL PROVIDING FOR CASH BEQUEST

I give and bequeath unto Trustees Of The California Medical Association, a nonprofit corporation of California, the sum of $———, to be held as a fund, to be known as the [here insert name desired] Fund, the principal whereof shall from time to time be invested to the best advantage compatible with safety, and the income whereof shall be used and applied for scientific, educational or hospital purposes.

* * *

FORM OF CLAUSE OF WILL PROVIDING FOR BEQUEST OF PERSONAL PROPERTY

I give and bequeath unto Trustees Of The California Medical Association, a nonprofit corporation of California [here describe the property], the same, or the proceeds thereof, to be held as a perpetual fund, to be known as the [here insert name desired] Fund, the income whereof shall be used and applied for scientific, educational or hospital purposes. The said corporation shall have the power to sell said property and to invest and reinvest the proceeds arising from the sale thereof from time to time as it may deem advisable for the purpose of producing as large an income as may be compatible with safety.

---

* These Bequest Forms were discussed editorially in CALIFORNIA AND WESTERN MEDICINE, March, 1936, p. 145, and June, 1936, issue, p. 460.

APPROVED CLINICAL PATHOLOGISTS

American Medical Association Essentials for An Approved Clinical Pathologist

An approved clinical pathologist should be a licensed graduate of medicine. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry, and other allied subjects for at least three years, and he should be reasonably familiar with the manifestations of disease in the body. The director of a clinical laboratory shall be on full time or have definite hours of attendance, devoting the major part of his time to this specialty. A clinical laboratory is an institution organized for the practical application of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source, and progress of disease in the human body.

The following Clinical Pathologists directing private laboratories in California are approved by the Council on Medical Education and Hospitals of the American Medical Association:

Clinical Laboratory of Drs. W. V. Brem, A. H. Zeiler, Roy W. Hammack and G. D. Maner, 657 So. Westlake Avenue, Los Angeles, California.

Zera E. Bolin, M. D., 490 Post Street, San Francisco, California.

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I give and devise unto Trustees Of The California Medical Association, a nonprofit corporation of California, to aid and further its scientific, educational and hospital purposes, and to be known as the ——— Gift, the following described real property situate in the County of ———, State of California, and more particularly described as follows, to wit:

* * *

FORM OF CLAUSE OF WILL PROVIDING FOR DEVISE OF REAL PROPERTY

I give and devise unto Trustees Of The California Medical Association, a nonprofit corporation of California [here describe the property], the same, or the proceeds thereof, to be held as a perpetual fund, to be known as the [here insert name desired] Fund, the income whereof shall be used for and applied to the support and maintenance of scientific, educational or hospital purposes. The said corporation shall have the power to sell said property and to invest and reinvest the proceeds arising from the sale thereof from time to time as it may deem advisable for the purpose of producing as large an income as may be compatible with safety.

Federal Food and Drug Administration Reports.—Violations involving health must come first, but, whenever they can spare time, inspectors give attention to economic frauds. In May there were seizures of the following commodities in this class of violations: 640 cans of apricot juice and 620 cases of tomato juice, both containing added water; 1,300 cans of so-called olive oil consisting mostly of tea seed oil, and 213 bottles of short-volume olive oil; 3,036 packages of a so-called "Old English" cheese owing its advertised "tingle" to a liberal sprinkling of red pepper rather than to its age and to the curing process, as claimed in its labeling; 120 jars of preserves deficient in fruit, 370 cases of substandard canned peas not labeled to show their substandard condition, and 658 cases of canned pears showing a like violation.

There was only one seizure in May on a charge of the presence of a poisonous ingredient. It involved a shipment of wine found to contain dangerous quantities of fluorine. Sixty-six bottles were seized and destroyed. A hundred cases of beer and ale were also seized because of label representations of alcohol contents ranging from 8 per cent to 14 per cent, when the beverages contained in fact only between 4.6 per cent and 6.5 per cent of alcohol.

Drugs seized in May included one lot of below-standard epinephrine ampoules, 93 cans of deteriorated ether, 38 bottles of below-standard chloroform, 1,300 bottles of so-called rubbing "alcohol" made up mostly of isopropyl alcohol, and the following products seized because of false and fraudulent medicinal claims: "Chlor-O-Zone," a water solution of chloramine, for pyorrhea, bleeding gums, infected wounds, trench mouth, stomatitis, tonsillitis, dermatitis, vaginitis, conjunctivitis, leucorrhea, sore throat, pink eye and eczema; "Kadiok," consisting of water and 7½ per cent alcohol (the label claimed 15 per cent), offered for ailments of the digestive tract, rheumatism, high blood pressure, appendicitis, kidney and liver disorders, backache, nervous disorders and sleeplessness; "L.H.C. Herbal Compound," a water-and-alcohol solution of plant extractives including laxatives and alkaloids, with iron compounds and salicylates, falsely represented as containing potassium and iron iodides, iron peptonate and sodium salicylate, for eruptions, pimples, tetter, acne, rash, rheumatism, arthritis, lumbago, sciatica, scrofula, boils, impure blood, septicemia, chronic constipation and anemia; "LaGreen's Famous Healing Oil," represented as a rattlesnake oil but consisting of kerosene, mustard oil and sassafras oil, for rheumatism, aches, pains, soreness, stiff joints, colds,

(Continued on Next Page)

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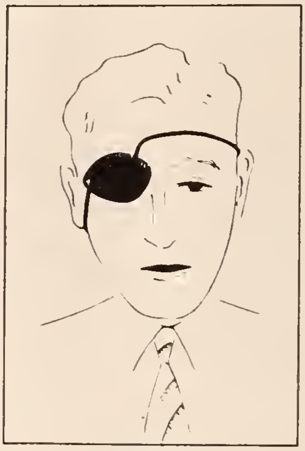

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(Continued from Preceding Page)

headaches, toothache, croup and pneumonia; "Life-Aid Mineral Compound," consisting of sodium, magnesium and calcium sulphates, sulfuric acid and sugar, and small amounts of salicylic acid, iron phosphate and saccharin in water with a red dye, for indigestion, gastritis, rheumatic pains, nervousness and dull, weak feelings; an extract of witch-hazel offered for the treatment of painful swellings, lame back, piles, sore throat, and rheumatism; and a mouth wash claiming to be "highly antiseptic" and a "powerful germ-killer," but shown on test to be ineffective against the ordinary pus-forming organisms.

How to Keep the Baby Well.—Most babies are well when they are born. To keep your baby well feed him according to the doctor's advice, teach him good health habits, and get the doctor's help in guarding him against disease.

A well baby has clear skin, bright, wide-open eyes, springy muscles, and a contented expression. He cries very little, has a good appetite, sleeps quietly with his mouth closed, and has regular bowel movements of the normal color and consistency. He shows no evidence of pain or discomfort, and he gains steadily in weight, height, and ability to do things.

As a rule the baby doubles his birth weight by the end of the fifth or sixth month and trebles it by the end of the first year. During the third month he learns to hold up his head when his body is supported. From the third to the fifth month he usually begins to laugh aloud. At seven or eight months he may sit erect and soon will be beginning to creep. He begins to walk at 12 to 18 months. At one year of age he usually can speak a few words. Usually his first teeth appear when he is six or eight months old. At one year he probably will have six teeth, at one and one-half years, twelve; and at two years, sixteen.

If your baby does not have these signs of health and normal development, tell the doctor.

Do not wait to consult the doctor until something goes wrong, however. You should keep your baby under the doctor's supervision from birth. A mother cannot recognize many early signs of trouble, for she is not trained to do this. Perhaps she is too near the baby and sees him too often to realize that any change is taking place. The doctor, who sees the baby once or twice a month, looks at him with a trained eye and can see whether he is as rosy as usual or is getting a little pale, whether he is as active as he should be, or whether he shows other signs that may mean trouble later.

Weigh the baby once a week, at home or at the doctor's office or at a child-health center. At least once a month mother and baby should be seen by the doctor for general advice.—*The Children's Bureau, United States Department of Labor, Washington.*

Feeding the Baby.—As soon as the baby is born consult the doctor with regard to feeding, and follow his advice with care.

The best food for the baby in his first six or seven months is his mother's milk, but whether the baby's mother nurses him or whether he is artificially fed, he soon needs additional foods besides milk. The artificially fed baby especially needs such foods.

Before the end of the first month the baby should begin to have cod-liver oil or other source of vitamin D. If you give him cod-liver oil be sure that it has been tested for vitamin D. It is better to begin giving cod-liver oil at the end of the baby's second week, especially if the baby is artificially fed. Except in very warm, sunny climates both cod-liver oil and sunlight are needed if the baby is to be protected from rickets.

Orange juice or tomato juice should be given to prevent scurvy. It should be given to every baby by the end of the first month. If the baby is artificially fed, it should be begun earlier—at the end of the second week.

Cooked cereal may be begun at the beginning of the fifth month. Egg yolk is usually begun by the fifth month.

(Continued in Back Advertising Section, Page 34)

What makes a bio-assay dependable?

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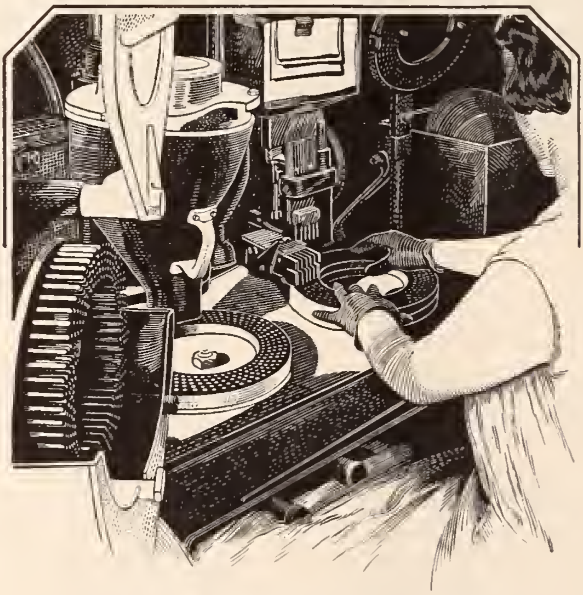

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Address editorial communications to Dr. George H. Kress as per address above; advertising and business communications to Secretary-Treasurer, Dr. Frederick C. Warnshuis, also at above address.

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Change of Address.—Request for change of address should give both the old and the new address. No change in any address on the mailing list will be made until such change is requested by county secretaries or by the member concerned.

Responsibility for Statements and Conclusions in Original Articles.—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

Contributions—Exclusive Publication.—Articles are accepted for publication on condition that they are contributed solely to this journal.

Contributions—Length of Articles: Extra Costs.—Original articles should not exceed three and one-half pages in length. Authors who wish articles of greater length printed must pay extra costs involved. Illustrations in excess of amount allowed by the Council are also extra.

Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

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EDITORIALS†

A NEW LEGISLATIVE PROBLEM: POSSIBLE DANGER TO CALIFORNIA STATE MEDICAL PRACTICE ACT

California's Medical Law of 1876.—California's first Medical Practice Act came into existence on April 17, 1876, at an annual meeting of the Medical Society of the State of California, the State Legislature having, on April 3, 1876, enacted a law

> providing for the appointment of medical examiners, who should be authorized to determine, in accordance with the provisions of the aforesaid enactment, what persons are duly qualified as practitioners of medicine and surgery.

In the two years which followed, a total of 1,026 regular physicians were duly licensed, and of these some 1,015 physicians became members of the Medical Society of the State of California.

* * *

Amended Laws of 1878: Three Examining Boards.—Grave doubts having arisen concerning the adequacy of the law of 1876, the Medical Society of the State of California (by which name the California Medical Association was formerly known) proposed to the Legislature certain amendments, and these having been enacted, became law on April 1, 1878. The Board of Examiners so created were representatives of the

> Medical Society of the State of California, the Eclectic Medical Society of the State of California, and the California State Homeopathic Medical Society, corporations organized and existing under and by virtue of the laws of this State, and no other corporation, society, persons or person, shall appoint annually a Board of Examiners, consisting of seven members, who shall hold their office for one year, and until their successors shall be chosen.

Concerning that law the Supreme Court of the State of California, considering an appeal attacking the statute, stated as part of the opinion then handed down:

> Our conclusion is that, by conferring the authority and imposing the duty of appointing boards of examiners on the three societies named in the Act, the Legislature did not exceed the limitation of its powers contained in the provision of the Constitution above quoted; and that it is unnecessary herein to express any opinion as to the power of the Legislature to require that the fees collected by the boards should be paid to the societies named, since—even if it be assumed that such portions of the law are unconstitutional—the remaining portions are stated independ-

---

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column, which follows.

> ently, and of themselves contain a complete scheme for the examination of diplomas and applicants, for the prohibition of certificates by others than those empowered by the Act to issue them, and for the punishment of charlatanry and empiricism.

* * *

Amended Law of 1907: A Newly Created Composite Board.—Without delving further into a detailed history of the Medical Practice Act, it may be in order to mention several important changes. By 1901 the Legislature of California had created a Board of Osteopathic Examiners, but on May 1, 1907, a law was enacted which

> repealed the prior medical and osteopathic acts and provided for the appointment of a composite board to regulate applicants from all schools and the practice of those licensed. This Act contained the following provisions: (1) Board made up as follows: Five members of Medical Society of State of California, two members of California Homeopathic Society, two members of Eclectic Medical Society, two members of Osteopathic Society of State of California.

* * *

The 1922 Initiative Laws of the Sectarian Schools.—The above arrangement continued until 1922, when, at the general election of November 7, 1922, the citizens of California, by initiative vote, created a separate Board of Osteopathic Examiners, that initiative law containing provisions making it possible to secure certain changes by amendments to the Medical Practice Act.*

* * *

Existing Medical Practice Act Somewhat Loose in Phraseology.—An inspection or perusal of the existing Medical Practice Act of California immediately gives the impression of a seeming lack of proper order and clarity of expression; on which account the suggestion has been rather frequently made that it would be a more readable document if it were rearranged or codified. In that point of view, members of the present and previous Boards of Examiners have concurred. However, with a greater understanding of the difficulties encountered by them in carrying out the law's provisions, and the knowledge that some of the strongest and most needed portions had received the sanction of the State's Supreme Court, they have been reluctant to propose amendments incorporating changes in phraseology or text which, being new, might again need court opinions to establish their constitutionality or scope. That is why, in the last ten to twenty years, amendments proposed by the Board have been of a constructive rather than radical nature; such as were proposed being advocated only when experience in board procedures indicated their special need.

* * *

A New and Serious Complication.—Comes now, out of a comparatively clear sky, a duly and legally constituted State body, the California Code Commission, created by the provisions of a legislative enactment known as Chapter 750, Statutes of 1929, to

> undertake a restatement of all the statutory laws [of the State of California] "as will best serve clearly and correctly to express the existing provisions of the law." (Stats. 1929, Ch. 750, p. 1427, as amended.) In doing this work the Commission seeks to codify the statutes, without any change in the effect that they now have in their uncodified condition. No substantive change in the law is to be made.

Among the laws naturally considered by the California Code Commission is the Medical Practice Act, which, through the Commission's statute advisers, has been practically redrawn, a final redraft to be prepared and introduced to the Legislature which will convene in January, 1937; such codified form of the present Medical Practice Act to be submitted with a recommendation for passage without amendment.

In other words, the present Medical Practice Act, as finally codified by the Commission (but without the addition of any new provisions), will be sent to the Legislature, with other laws of California, and will probably be passed without alteration. Wherefore, of course, it is necessary that the codified draft, when submitted, in all essential provisions should be the same as the present Medical Practice Act and be acceptable to the medical profession.

* * *

First Draft of the Codified Medical Practice Act Is Now Being Considered.—This first draft of the codified Act has been mimeographed and sent to members of the profession who have been recommended to the Commission as persons able to be of advisory service. That the matter is of no trivial importance may be noted in perusing the letter sent by Dr. Charles B. Pinkham, Secretary of the Board of Medical Examiners of the State of California, to Mr. Arthur McHenry, Statute Reviser, whose name is signed to the transmittal letter accompanying the mimeographed redraft. Because of the great importance of the Medical Practice Act to every legally licensed physician in the State, this letter of Doctor Pinkham is here reprinted in full:

San Francisco, California,
September 14, 1936.

Subject:

Yours of September 10 re Medical Practice Act—Revision.

California Code Commission,
Sacramento, California.

Attention, Mr. Arthur McHenry, Statute Reviser.

Dear Mr. McHenry:

This will acknowledge receipt of your letter, stating that Lester R. Daniels, D. O., Secretary of the Board of Osteopathic Examiners, together with John L. Brannely, attorney for said Board, have requested an interview relative to the revised Medical Practice Act, as mimeographed in the "Proposed Business and Professional Code."

The undersigned must state that he is very much concerned over the way in which the Medical Practice Act has been torn apart, as manifested by the mimeographed copy recently received from you. Inasmuch as the entire medical profession of this State (as well as the osteopathic profession) is interested in the Medical Practice Act, a conference such as you mention should be open to the Council of the California Medical Association: June Harris, M. D., Medico-Dental Building, Sacramento, Chairman of the Legislative Committee of the California Medical Association; Charles E. Schoff, M. D., Chairman of the Committee on Legislation of the Board of Medical Examiners; Hartley Peart, Attorney-at-Law, and Counsel for the California Medical Association; Fred C. Warnshuis, M. D., Secretary of the California Medical Association; the deans of the Medical Schools of California, etc.

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* See August, 1936, issue of CALIFORNIA AND WESTERN MEDICINE, page 117, for comments on this provision of the law.

My reading of the mimeographed revision of the Medical Practice Act, recently received from the California Code Commission, impresses me with the idea that the existing Act has been thoroughly riddled. In my opinion the revision of said Act so confuses the present Act that it gives promise to open the gates for a lowered standard of education and licensure, as well as to embarrass the enforcement of the law.

The present Medical Practice Act is the result of careful study by some of the best legal minds, both in the Legislature and outside. Many sections have been written by men who are now Superior Judges. Amendments have been numerous, that defects discovered through experience with its workings might be remedied. The Act in its many provisions has been thoroughly threshed out in the various courts. Its constitutionality has been determined by the United States Supreme Court. To throw aside all the years of strenuous endeavor and start with a new-born infant seems futile.

Such an important law as the present Medical Practice Act should not be dissected and rearranged into the confusing form recently sent out by the Code Commission. The revision proposed by the Code Commission will necessitate a readjudication of many of the salient features of the Medical Act.

I am sending a copy of this communication to the Secretary of the California Medical Association and its Chairman on Legislation, as well as to the deans of the various medical schools in this State, all vitally interested in maintaining the standards of the California Medical Practice Act.

Very truly yours,
C. B. Pinkham, M. D.,
Secretary-Treasurer.

* * *

The Redraft of the Present Medical Practice Act Is the Profession's Major Problem No. 1 in the 1937 Legislature.—It may be stated that, in the above recodification, we have Major Proposition No. 1 needing very prompt and explicit attention, not only by the Board of Medical Examiners, but by every officer and member of the California Medical Association and its component county societies.

The Council of the Association, which meets in Los Angeles on September 26, will no doubt give the matter its most careful consideration and take all necessary action to keep component county societies and members informed concerning this new issue.* The subject, it need hardly be said, is of tremendous importance; because, if the codification of the Commission shall be found to be lacking in the soundness of the present Medical Practice Act, it may permit the legal recognition of hundreds of practitioners not now eligible to practice as physicians and surgeons in California to, after all, secure licenses. Such a calamity would be a real blow both to public health and also the best interests of medical practice. The importance, therefore, of active interest in this matter by every physician already licensed to practice here cannot be overemphasized, and members of the California Medical Association are urged to keep in close touch with the situation as it develops.

AUTOMOBILE ACCIDENTS AND "VEHICIDES": SOME FEDERAL AND CALIFORNIA STATISTICS

One of the Leading Causes of Death.—In recent years it has become necessary to include among the leading causes of deaths of human beings the constantly-increasing automobile accidents, and this in spite of organized effort in many parts of the United States through laws and publicity campaigns to bring about a saner use of serviceable, but also dangerous, auto vehicles.

As a consequence of which physicians, who year after year read article after article in the medical press, dealing with improved methods of treatment through which it is hoped that occasionally an extra life might be saved, may well wonder at the seeming indifference by so many persons driving automobiles, to the health and lives of their human fellows.

* * *

The Appalling Federal Figures.—Consider for a moment that in the year 1935 the United States showed a total of 1,285,000 injuries, and 37,000 deaths due to motor accidents. Also, that 105,000 of the nonfatal injuries resulted in permanent disabilities. These summaries are certainly little less than appalling!

* * *

California's Unenviable Record.*—To bring the statistics nearer home, meditate on the mortality from automobile accidents as publicized by the United States Bureau of the Census:

Of the fatal mishaps due to automobiles for the brief four weeks' period ending August 29, 1936, Long Beach had 6 resulting in death; Los Angeles, 36; and both San Diego and San Francisco, 7. For the same period, New York City had 20 deaths; Chicago, 59; and Philadelphia, 20.

For the entire year, ending August 29, 1936, vehicide deaths were:

Los Angeles, 549; Long Beach, 59; San Diego, 58; San Francisco, 56, when, by contrast, New York had 949 deaths; Chicago, 743; and Philadelphia, 254.

While the death rates from automobile accidents per 100,000 population for the same fifty-two weeks were as follows:

Los Angeles, 37.5; Long Beach, 35; San Diego, 34.3; San Francisco, 8.3; New York, 13; Chicago, 19.4; and Philadelphia, 12.8.

* * *

Where Are We Lacking?—Vital statistics such as the above cannot do otherwise than excite both wonderment and sorrow. Somewhere, something is wrong, something lacking. One thing is certain: too many persons drive automobiles who should not be permitted to do so—drunken persons, children, mentally and physically deficient individuals. Adequate automobile licensure laws, also, are evidently lacking. Likewise, the penalizing statutes for improper driving and, perhaps, more than that, the weakness of certain police and court jurisdictions in handling automobile accident cases.*

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* The California Medical Association Council on September 26 appointed a special committee of five, with Dr. Morton R. Gibbons as chairman, to act on this matter. The committee will be glad to receive suggestions.

* See also current news items on page 372.

In California, San Francisco is to be congratulated on its low death rate of 8.3, in contrast to that of Los Angeles, with 37.5; Long Beach, with 35; and San Diego, 34.3. San Francisco must have something more than its hills (deterrents to reckless drivers because of the primary danger to themselves) to account for its favorable record. In addition, New York, Chicago, and Philadelphia, each presents a rate that justifies self-analysis by the citizens of Los Angeles, Long Beach, and San Diego.

* * *

Have County Medical Societies No Obligation in This?—When will this mutilation and death of human beings, so possibly preventable, be lessened? Is it not within the province of medical men and women, who spend so much of their efforts in preventive medicine along other lines, to take a more active and organized part in betterment efforts toward this grave problem? Would it not be a proper expression of coöperation if every county medical society in the State of California appointed a special committee to work with other civic groups in promoting measures to lessen the number of vehicides in the State of California?

FALL PROGRAM TIME FOR COUNTY SOCIETIES

The Summer Vacation Months Are Behind Us: What Now?—Once again, at the end of the summer vacation months, we take up our county society meetings. How will those of the fall months measure up to those of the winter and spring of the current and previous years? How can interest in the meetings be stimulated, and what means have we at our disposal whereby they may be made still more valuable? What are some of the basic things to keep in mind concerning meetings, and what organization and other problems should receive special attention in the months immediately ahead? These and similar questions come to the minds of alert officers and program committees; the difficulty, however, is not to have perplexing questions such as the above bob up for consideration, but to find the solutions best adapted, in each instance, to local needs and desires.

* * *

The Societies in the Metropolitan Centers.—County societies located in metropolitan centers naturally have problems quite different from those met with in counties of much lesser population. The larger a society becomes, the less interest do its members display in meetings of the entire unit, and the more do they give their efforts to sections in the specialties. In several respects this is unfortunate; and yet, because of the professional, family, social and other demands on time, and also because of geographical factors, it is not easy for many members to devote even one evening a month for a general county society meeting. For if the papers presented prove of little interest, and if there be no social or fraternal contacts before or after the program, the attending member, after a few such experiences, is apt to decide that he will derive more pleasure and profit by remaining at home with his family, quietly reading the literature always awaiting his attention.

* * *

The Experience of the Los Angeles County Medical Association.—It has been interesting to watch the trends in meeting attendance in the Los Angeles County Medical Association. About twenty-five years ago that society, with a membership of about eight hundred, and only one or two sections in the specialties, had rather large general meetings. But—and the "but" is important—in those days, at the end of every meeting and at the expense of the Society, a generous buffet luncheon was served, members remaining oftentimes almost one hour after the closing program hour of ten. Yet it may be taken for granted that the type of scientific paper presented then was of much the same order as those of today. What, therefore, was the general meeting lure of those days? Among those who attended it is agreed that it was the good fellowship, promoting the formation of new friendships and better understandings, associated with chattings over the coffee, that led several hundred men to come out once or twice a month; whereas now, with a membership of more than two thousand, a considerable lesser attendance is in evidence at the general meetings.

It must be noted that this is not stated in criticism of the present-day organization of that society, which has not only a total of twelve geographical branches, but an additional fourteen sections in the specialties, some with as large, or larger, attendance at their monthly meetings than is to be seen at the general meetings. The reasons are easily understood: physicians are primarily interested in their special work and their local communities, and they naturally find it more easy and profitable to participate in the programs of a specialty section or a geographical branch.

With the highly differentiated set-up in the large Los Angeles County Medical Association of today, in a county covering a geographical domain as large as a New England state, it is not to be wondered at that the old order has passed. The present task in that society is to have every geographical branch and specialty section avail itself of all its opportunities and to make the respective work of each of most value to its members; while at the same, and at all times, integrating their members into the policies and aims of the general organization.

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* An article in the *Readers Digest* of October, 1936, on "Foolproof Roads," condensed from *Fortune*, contained the following paragraph:

Careful estimates indicate that 15 per cent of the drivers cause nearly 100 per cent of the accidents. Among them are the speed maniacs, the wilfully reckless drivers, the habitually drunken drivers, the psychopaths, the physical defectives, the juvenile irresponsibles, and the automotive morons. The only effective way to handle such menaces is to police them off the highways, and here the states have failed almost completely. Four states impose no restrictions whatever upon the driver. Eight others require only that noncommercial operators shall have attained a certain age, as low as fourteen. Of the remaining thirty-six that make drivers procure licenses, twelve grant them on mere application, and of the twenty-four states that demand driving tests not one imposes a sense-making examination.

* * *

Wherein Nonmetropolitan Societies Are Fortunate.—The members of nonmetropolitan societies may congratulate themselves upon their good fortune in being able to know one another with considerable intimacy and, through their organization, to derive not only pleasure from the meetings, but profit in a considerable degree from association with one another, as they daily go about in the practice of their profession. It is gratifying to note that most of the smaller county medical societies appreciate the possible benefit through a preliminary dinner, or a postmeeting supper, as part of the regular procedure. The value of such social sessions, indeed, cannot be overestimated. We cannot break bread with and also dislike or hate one another.

* * *

Concerning Scientific Programs.—A few comments concerning the scientific papers. The program committee (of whoever it may be composed: the secretary, the president, or a special group) should map out, if possible, its program in advance. Such a plan is satisfactorily carried through in many societies, and with some effort it can be made practical in all organizations. Do not depend altogether on outside speakers. The members of a medical society profit most in proportion as they themselves make an effort to contribute papers on medical problems coming under their immediate observation. This is particularly the case if such presentations are followed by free and kindly discussion participated in by other local colleagues. The out-of-county speaker should be on the occasional, rather than on the regular program.

To stimulate extra interest, clinic days may be arranged, to occur from time to time. The State Association is prepared to aid in this, and the Association Secretary will coöperate in all such endeavors.

* * *

Civic Obligations.—Let it not be forgotten, too, that in November of this year, less than a month away, the State election will be held. At that time the State assemblymen and State senators who make up the legislature will be elected.

The members of every county society should know the attitude on public health and medical practice questions of all such legislative candidates. "An ounce of prevention is worth a pound of cure." Find out what you want to know in advance, not afterward: for no candidates who are opposed to legitimate public health or medical practice standards should be supported by physicians. More than that, every proper and diplomatic method should be used to prevent the election of such candidates.

The 1937 California Legislature will have before it many items of grave importance to medical men and women. One of these, the codified Medical Practice Act, is discussed editorially in this same issue of California and Western Medicine. Officers of county societies who fail to call the attention of their members, before the legislature assembles, to the importance of civic obligations may have reason to reproach themselves after the legislature adjourns!

* * *

To Summarize.—On our immediate needs, which are: stimulating professional programs, best possible set-ups for fraternal and social understandings, and alertness to civic responsibilities in relation to public health and medical practice standards. Those should be some of our major objectives in the present and immediate future.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 364.

EDITORIAL COMMENT†

THE PULSE PRESSURE—PULSE RATE EXERCISE TOLERANCE TEST

Since 1889 the effects of exercise on the blood pressure and pulse rate have been studied and used as tests of efficiency of the circulatory system. The difficulty in drawing conclusions from various reactions has been that individuals with effort syndrome, but no organic heart disease—the so-called "irritable hearts" and "soldiers' hearts," showed extreme fluctuations of blood pressure and pulse rate. Most tests gave as the normal response a rise of the systolic blood pressure and pulse rate to a given degree, *i. e.*, blood pressure 120 to 140 systolic, and pulse of from 80 to 100 with a fixed exercise. A normal reaction should show a return to previous levels within two and one-half minutes. Often formulae were developed, such as in the Schneider test. T. R. Harrison estimated cardiac efficiency by measuring dyspnea after fixed exercise, developing the formula for a normal ventilation quotient.

Master devised as an exercise tolerance test the ability of the blood pressure and pulse rate to return to within ten points of normal levels within two minutes after cessation of exercise. He wisely presented tables of normal degree of exercise for different ages and weights (Table 1). The figures represent the number of ascents of a 1½-foot, 2-step climb in one and one-half minutes, which, if multiplied by weight, equal foot pounds per minute of work (excluding work of descent). Some

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† This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Table 1

A. Standard Number of Ascents for Males

Weight (lb.)	Age in Years 5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69
40–49	35	36	....	....	....	....	....	....	....	....	....	....	....
50–59	33	35	32	....	....	....	....	....	....	....	....	....	....
60–69					....	....	....	....	....	....	....	....	....
70–79	28	32	30	....	....	....	....	....	....	....	....	....	....
80–89	26	30	29	29	29	28	27	27	26	25	25	24	23
90–99	24	29	28	28	28	27	27	26	25	25	24	23	22
100–109	22	27	27	28	28	27	26	25	25	24	23	22	22
110–119	20	26	26	27	27	26	25	25	24	23	23	22	21
120–129	18	24	25	26	27	26	25	24	23	23	22	21	20
130–139	16	23	24	25	26	25	24	23	23	22	21	20	20
140–149	....	21	23	24	25	24	24	23	22	21	20	20	19
150–159	....	20	22	24	25	24	23	22	21	20	20	19	18
160–169	....	18	21	23	24	23	22	22	21	20	19	18	18
170–179	....	....	20	22	23	23	22	21	20	19	18	18	17
180–189	....	....	19	21	23	22	21	20	19	19	18	17	16
190–199	....	....	18	20	22	21	21	20	19	18	17	16	15
200–209	....	....	....	19	21	21	20	19	18	17	16	16	15
210–219	....	....	....	18	21	20	19	18	17	17	16	15	14
220–229	....	....	....	17	20	20	19	18	17	16	15	14	13

B. Standard Number of Ascents for Females

Weight (lb.)	Age in Years 5–9	10–14	15–19	20–24	25–29	30–34	35–49	40–44	45–49	50–54	55–59	60–64	65–69
40–49	35	35	33	....	....	....	....	....	....	....	....	.	....
50–59	33	33	32	....	....	....	....	....	....	....	....	....	....
60–69	31	32	30	....	....	....	....	....	...	....	....	....	....
70–79	28	30	29	....	....	....	....	....	....	....	....	....	....
80–89	26	28	28	28	28	27	26	24	23	22	21	21	20
90–99	24	27	26	27	27	26	25	24	23	22	21	20	19
100–109	22	25	25	26	26	25	24	23	22	21	20	19	18
110–119	20	23	23	25	25	24	23	22	21	20	19	18	18
120–129	18	22	22	24	24	23	22	21	20	19	19	18	17
130–139	16	20	20	23	23	22	21	20	19	19	18	17	16
140–149	....	18	19	22	22	21	20	19	19	18	17	16	16
150–159	....	17	17	21	20	20	19	19	18	17	16	16	15
160–169	....	15	16	20	19	19	18	18	17	16	16	15	14
170–179	....	13	14	19	18	18	17	17	16	16	15	14	13
180–189	....	....	13	18	17	17	17	16	16	15	14	14	13
190–199	....	....	12	17	16	16	16	15	15	14	13	13	12
200–209	....	....	....	16	15	15	15	14	14	13	13	12	11
210–219	....	....	....	15	14	14	14	13	13	13	12	11	11
220–229	....	....	....	14	13	13	13	13	12	12	11	11	10

dyspnea results, which represents an oxygen debt. This test alone is of much value, but in recent years the author has used a test of heart function depending on the general assumption that widening-pulse pressure is an index of increased systolic heart output. Starr, Y. Henderson, Bock, Burwell and others have shown that there is a correlation between a rising-pulse pressure and an increased systolic heart output, and Ogden and Shock have worked with normal adolescents (an unfortunately unstable group) in attempting to demonstrate this correlation. Bazett and his collaborators recently have proved this relationship, using a special technique for blood pressure recording.

It is well known that in heart failure the pulse pressure narrows and the pulse rate rises, improvement often being measured by reversal of this state. The logical reason for this is that the minute output of the heart of oxygenated blood for the tissues must be maintained by a rising pulse rate (through the Bainbridge reflex) when the output per beat falls. Exercise to the point of dyspnea puts an increased demand on any heart by producing an oxygen debt. This should roughly tell us whether the muscle is able, through diastolic dilatation and forceful contraction, as represented by the pulse pressure, to proportionately take care of the increased minute output, or if the increased rate must account for most of it. One can combine the Master's test of variable amounts of exercise, using a one-foot step for one minute, with an analysis of the proportion of increase of pulse pressure and pulse rate to tell how the heart is taking care of the minute output demanded. The normal may show figures as follows: Resting blood pressure 120/80 = 40 pulse pressure, 60 pulse rate; after exercise, blood pressure 140/80 = 60 pulse pressure (a 50 per cent increase) and 90 pulse rate (a 50 per cent increase). A patient with myocardial damage, on the contrary, characteristically shows figures such as: Resting blood pressure 120/80 = 40 pulse pressure, 60 pulse rate; after exercise, blood pressure 130/80 = 50 pulse pressure (a 25 per cent increase) and 120 pulse rate (a 100 per cent increase). Such a patient, after his Standard Master's exercise, would not return to a normal condition in blood pressure and pulse rate in from two to two and one-half minutes.

Patients with complete heart-block illustrate this phenomenon particularly well. Since their pulse rate is fixed, their only means of increasing minute cardiac output is by increased systolic output per beat, *i. e.*, resting blood pressure 160/80, pulse rate 40; after exercise, blood pressure 240/80 = 100 per cent increase, pulse rate 40. Occasionally, the duration of systolic output is prolonged, *i. e.*, aortic stenosis, which would destroy the correlation of pulse pressure increase and systolic output increase. Naturally, aortic insufficiency would distort the estimates, and marked arteriosclerosis of the great vessels tend to exaggerate the pulse pressure reactions. In patients with angina pectoris, occasionally the pulse rate does not rise proportionately to pulse pressure. Even in unstable individuals, *i. e.,* adolescents and patients showing effort syndrome, it is rare that a marked disproportion is encountered even though both pulse and blood pressure responses are exaggerated and remain abnormally elevated.

490 Post Street.

John J. Sampson,
San Francisco.

CARDIAC MURMURS

The stethoscope is of little clinical value unless the physician understands the significance of the sounds he hears. When the auscultatory method is properly applied to the circulatory system, the ability to diagnose certain functional disturbances is greatly enhanced, and the nature of lesions predicated. Fortified by this evidence, prognosis and treatment may be more rationally directed.

Cardiac murmurs may arise from several sources; some external to the heart, but all associated in some manner with its contraction. In growing children and young adults, faults in stream-lining of the heart and great vessels are probably responsible for most of the so-called functional murmurs. They are usually systolic in time and localized. Cardiorespiratory murmurs are also common at this age and have no clinical significance. Pericardial or pleuropericardial friction sounds are also differentiated from murmurs of valvular origin.

Murmurs arising in conjunction with valvular defects are important. Their location in the chest, direction of transmission, intensity, pitch and time in the cardiac cycle determine their point of origin. The effects of exercise and change in posture may aid in interpretation.

In studying the propagation of cardiac murmurs, it is well to remember that they travel on or with the blood current in somewhat the same fashion as audible sound travels on the wind. It is easier to whistle down the wind than up the wind.

Variations from the normal cardiac sounds and murmurs in the periphery will be taken up at another time.

Systolic murmurs at the base tend to be rough; if from the aortic valve, to be transmitted upward along the course of the larger branches of the aorta, and if from the pulmonic valve, to be transmitted more readily toward the left clavicle. They are frequently accompanied by a systolic thrill. If the aortic valve is more than slightly stenosed, the pulse is of the plateau type. A subject with a dilated aorta or dilated arteries arising from the arch may present a systolic murmur and thrill over the upper sternum and vessels at the root of the neck. This must be differentiated from aortic stenosis.

Aortic diastolic murmurs are usually soft, tend to replace the second aortic sound and are transmitted toward the apex, often fading over the midcardiac region where the right ventricle overlies the left ventricle, and becoming more audible again at the apex. A mid-diastolic rumble accompanied by a thrill at the apex may be noted in a few cases, and in a considerable number of cases a presystolic murmur (the Austin Flint murmur) and thrill will be observed at the apex. (The driving character of the aortic diastolic murmur is notable.)

Pulmonary diastolic murmurs (Graham Steele type) are usually of brief duration, localized to the second and third left interspaces close to the sternum. They are usually associated with right cardiac failure and are, therefore, generally transient. We have described a new murmur, presystolic in time, heard best at the tricuspid region in pulmonary insufficiency, and probably having the same mechanism as the Austin Flint murmur in aortic insufficiency. This murmur is also heard in right-sided failure and is transient.

Mitral systolic murmurs are heard best at the apex and are transmitted to the left and back. They are high-pitched and blowing in character. The harsh rasping systolic murmur at the apex in cardiosclerosis is most frequently associated with hypertrophy and dilatation of the heart, and sclerosis of the mitral valve. Exercise generally increases the intensity of the murmurs of mitral insufficiency.

Mitral diastolic murmurs may be early, middle, or late (presystolic). The auricular or presystolic murmur disappears with the onset of auricular fibrillation in the absence of aortic insufficiency. In rapid hearts the various phases of the murmur cannot be accurately recognized as the rumbling presystolic crescendo and loud first sound predominate, especially after exercise.

Tricuspid systolic murmurs are almost the rule in congestive heart failure. They are heard best over a small area at the lower sternum, just to the left of the lower sternum or in the epigastrium. They are of brief duration, "close to the ear," and often have an amphoric quality. With organic tricuspid valvulitis the murmur may be very harsh, and accompanied by a thrill.

Tricuspid diastolic murmurs are relatively uncommon and are usually associated with tricuspid stenosis. They may be early or late in diastole (presystolic). The presystolic phase disappears with the onset of auricular fibrillation.

University of California Hospital.

William J. Kerr,
San Francisco.

CHRONIC VITAMIN D TOXICITY

A warning against the possibility of acute or chronic poisoning from excessive administration of vitamin D preparations was recently made in these columns.[1] It was pointed out that there is as yet no evidence to indicate what the chronic toxicity of vitamin D preparations may be, especially if contaminated with "toxisterol." This poisonous ingredient, which may be present in any irradiated ergosterol product if the irradiation is not carefully controlled, is a powerful calcifying agent, but has no significant antirachitic properties.[2] Long-continued administration of relatively small amounts of vitamin D preparations, contaminated with "toxisterol," may lead to abnormal calcifications, whose presence may not be suspected for many years. It is doubtful that "calciferol," the most satisfactory irradiated ergosterol, is identical with natural vitamin D.[2] But there is evidence to indicate that excessive administration even of natural vitamin D products (including cod-liver oil) may promote cardiac disturbances or vascular abnormalities.[3]

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[1] Leake, C. D.: Calif. and West. Med., 44:149 (March), 1936.

Another more serious possibility concerning too extended or intensive use of vitamin D or irradiated ergosterol preparations has arisen as a result of the brilliant chemical work of the past six years on phenanthrene derivatives.[4] The most complex substances in this series are the sterols, which, by progressive dehydrogenation, may be converted into bile acids or sex hormones. The most potent carcinogenic agent known is methylcholanthrene,[4] which can readily be formed from bile acids by reactions of the type known to occur in the body. Fieser conservatively states that "while proof is entirely lacking, it appears possible that many forms of cancer may originate in the metabolic production of methylcholanthrene or related substances from the bile acids, or perhaps from the sterols or sex hormones, of the body."[4]

If such a possibility exists, there is further reason to urge caution in using, or advising for use, indiscriminate amounts of vitamin D or irradiated ergosterol products in excess of what the body needs, or can synthesize itself if there is sunlight available. It is important to remember that the experiment has not yet been made. We do not know whether or not the spontaneous cancer incidence in mammals given large amounts of vitamin D in infancy and adolescence would be any greater than in a series not so treated. But in humans it is wise, if the possibility exists, not to take the chance.

Naturally this is not an argument for interfering with the effective treatment or prevention of rickets by vitamin D. But it is a plea to use some discretion in the amounts of vitamin D prescribed. Commercial enterprise is endeavoring to capitalize to the fullest in the current popular vogue for vitamin D. In addition to a sun-tan craze, there are ballyhooed everywhere irradiated foodstuffs of all varieties, metabolized milks, and even "sunshine soaps." It is ridiculous. But when, on top of an unknown but probably quite adequate intake of vitamin D, especially in sunny California, children are dosed with large amounts of vitamin D preparations by overanxious mothers, it is time for physicians to use care in prescribing the drug. As in every phase of chemical use in medicine, physicians should carefully weigh the risk of using the chemical against the hazard of the disease. And the public should realize that vitamin D is a drug, that its administration should be guided by a physician, even in connection with metabolized or irradiated milk, and that commercial efforts to promote its indiscriminate use are ballyhoo for gain without due regard for public welfare.

Concerning this matter the Director of Public Health of San Francisco, Dr. J. C. Geiger, has issued a proper warning:[5] "The Director of Public Health wishes to record the fact that he disapproves the present tendency of manufacturers to add measured quantities of vitamins to foods for commercial purposes. The insufficient and incomplete scientific knowledge available at this time on the possible effects of the consumption of vitamin-reinforced food products over indefinite periods of time fully justifies the attention that caution should be observed in the use of such products. There is still considerable question, particularly in the instance of vitamin D, of what constitutes the proper dosage of vitamin concentrates in the various age groups. Any attempt to increase the sale of a food product, especially milk, by the addition of a substance whose value to the public health is still a controversial problem is indeed ill advised, since the final evidence, to be determined by research methods, has not yet been secured. Even if it is granted that the actual danger in the consumption of vitamin D milk is relatively minimal, there is as yet no definite and accepted information on the limits or margins of clinical safety. Under these circumstances, therefore, it is believed that the administration of such products should be surely in the province of the physician, and not in that of the commercial distributor or manufacturer of food products."

Pharmacological Laboratory,
University of California Medical School.

CHAUNCEY D. LEAKE, Ph.D.,
San Francisco.

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[2] Bills, C. E.: Physiol. Rev., 15:1 (Jan.), 1935.

[3] Herlitz, C. S.: Acta. Paediat., 8:443, 1931; Wahlin, B: Acta. Med. Scand., 74:430, 1931; Thatcher, L.: Lancet, 230:20 (Jan. 4), 1936.

[4] Fieser, L. F.: The Chemistry of Natural Products Related to Phenanthrene, New York, 1936.

[5] Geiger, J. C.: California State Department of Health, Weekly Bull., 15:98 (July 18), 1936.

Protective Foods.—Protective foods should be included in the menu of every man. These foods are particularly rich in vitamins, and you need vitamins to remain in health. The protective foods include leafy vegetables, fruits, and milk. Medical and scientific studies have demonstrated that their use aids in warding off disease, and so helps to increase the life span.

Leafy vegetables include lettuce, romaine, spinach, kale, cabbage, cauliflower, dandelion greens, turnip and beet tops, celery, and endive. Besides these, although not leafy vegetables, string beans and tomatoes are rich in protective substances. Every full meal should include two cooked vegetables as well as a vegetable salad, the latter preferably of raw vegetables, such as lettuce, tomatoes, celery, and carrots.

Oranges, grapefruit and lemon, in other words, the citrus fruits; bananas, apples, apricots, grapes, plums, pears, canteloupes, figs, pomegranates, are rich in vitamins, especially vitamin C, and should be eaten freely.

Every man should drink at least a pint of milk every day, for milk is the most nearly perfect food known. Dairy products, cheese and butter, also are fine for health. Both milk and cheese are rich in calcium, a mineral which the body must have.—Dr. John L. Rice, Commissioner of Health, New York City.

ORIGINAL ARTICLES

TUMORS AND CYSTS OF THE LUNG: DIAGNOSTIC METHODS*

By J. J. Singer, M.D.
St. Louis, Missouri

There are many who are of the opinion that tumors of the lung are increasing; but whether this conclusion is due to our greater skill in recognizing the condition, or whether tumor of the lung is really becoming more prevalent is still under consideration.

DIAGNOSIS OF LUNG TUMORS

The diagnosis of tumor of the lung may be difficult because the first manifestation may be atelectasis, pleural effusion, bronchiectasis, spontaneous pneumothorax, or empyema. If one is aware that the complication caused by the presence of a tumor may be the first warning, and a careful search is made for the primary cause, a correct diagnosis can readily be made. There are two types of tumor of the lung—benign and malignant. This refers to the cellular content of the tumor, but the physical state of the benign tumor may be such that it becomes malignant by producing pressure on important structures, and for this reason it is advisable to consider all tumors of the lungs as malignant. There are many types of tumor in the lung—mediastinal, pleural, and thoracic cage—and it is sometimes difficult to locate the disease, especially in the ordinary x-ray studies.

DIAGNOSTIC METHODS

Methods have been developed which do make the diagnosis easier now, and it is our purpose to discuss these in the order in which we have used them:

1. Clinical history.
2. Physical findings.
3. Fluoroscopic findings.
4. Roentgen ray.
5. Bronchography.
6. Bronchoscopy.
7. Biopsy.
8. Diagnostic pneumothorax.
9. Examination of pleural fluid and sputum.
10. Exploratory thoracostomy.

CLINICAL HISTORY

The clinical history of the patient is most important and easily elicited if only the condition of tumor is thought of.

Cough, dyspnea, and hemoptysis by themselves are not diagnostic; but if present in a patient of "cancer" age, then these symptoms become more important. Pain localized in the chest is most significant, since no other pathologic condition seems to present this constant distress. Dyspnea is a very common symptom, and in conjunction with cough and pain is most important. Loss of weight, strangely enough, is not noted very often, except in advanced cases.

PHYSICAL FINDINGS

It is obvious that physical findings cannot be conclusive. The signs are often due to the presence of abnormal tissue in the lung. The size of this, the location, and the densities determine the signs. It is important in analyzing the symptoms to remember that intrabronchial tumors may be small, but if atelectasis develops, one can find dullness, bronchial breathing and distortion of cardiac dullness. There are no definite signs leading to a diagnosis of carcinoma of the lung. In cases of long duration the signs of bronchitis, pleural effusion, abscess of the lung and bronchiectasis overshadow the tumor signs.

The laboratory findings are considered under physical signs; and here again there are no definite signs except in the study of pleural fluids, which will be discussed later.

FLUOROSCOPIC FINDINGS

Fluoroscopic examination follows the study of physical signs. Where signs of atelectasis or fluid are obtained the fluoroscopic examination should confirm them.

By proper "positioning" the patient before the fluoroscopic screen, one obtains pictures of the lung from all angles, and this part of the examination makes it possible to see even behind a large shadow, that is, if the shadow is due to a density in the posterior part of the chest when viewed from the anterior, and this shadow is increased in size; but when viewed posteriorly this shadow is smaller and then parts of the lung which were hidden before now become visible.

Occasionally fluid complicates this density by massing shadows, but when the patient is turned on one side or the other it is possible to shift the fluid, especially if air is introduced (diagnostic pneumothorax), so that the various masses can be individually seen.

ROENTGEN FILMS

When, by fluoroscopic studies, we have found these individual shadows in certain positions, then roentgen films are taken to make permanent records. It is also important in obtaining the proper density in films by more or less exposure, which must be determined after fluoroscopic examination. Roentgen rays give us a definite picture of the state of the lungs, but much study must be given to the relation of abnormal shadows to the structure of the lung, heart, and diaphragm.

BRONCHOGRAPHY

Bronchography is the one procedure in roentgen-ray studies that has been most helpful to us in determining the patency of the bronchial tree, the location of lung in relation to fluid and to the mediastinum. The introduction of the iodized oil into the lung is quite easy. Several years ago I described a method of instilling this oil merely by

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Guest-speaker paper read before the General Medicine Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25 to 28, 1936.

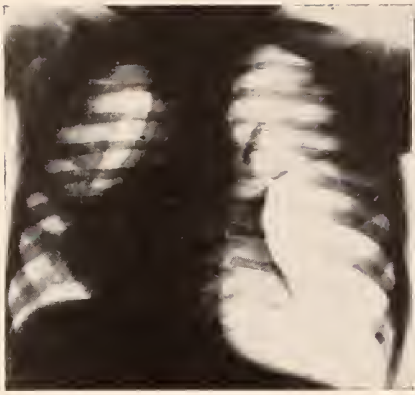

Fig. 1

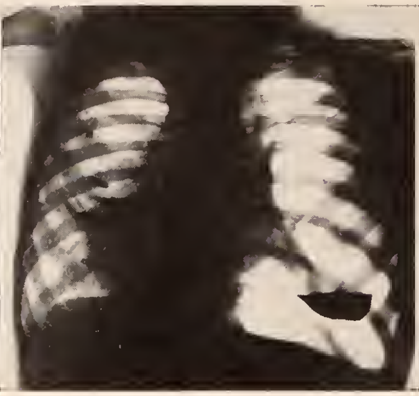

Fig. 2

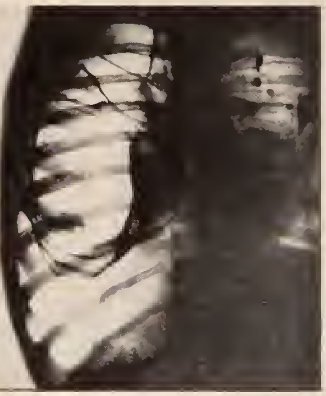

Fig. 3

Fig. 1.—N. D. Marked compression of right lung and displacement of mediastinum by pneumothorax and cysts. (Cysts not noted until lipiodol was injected.) See Fig. 2.

Fig. 2.—Lipiodol outlines lower portion of cysts in left lung and many cysts in right.

Fig. 3.—When patient was placed with left side up, the iodized oil shows the walls of numerous large cysts in the left lung and a few smaller cysts in the right lung. Note pneumothorax pocket in lower left chest cavity below cysts. When air was absorbed, the pleural leaves became adherent. No further leak from cysts occurred. With this condition the patient has been clinically well.

pulling out the tongue and dropping oil directly into the pharynx without the use of a local anesthetic. We have used this method many times and have been successful in most cases.

BRONCHOSCOPY

Occasionally one encounters patients who cannot control the gag reflex, and then we use a cocain spray in the pharynx. Bronchoscopic instillation of oil is done when it is otherwise necessary to use the bronchoscope.

BIOPSY

The most important aid to the exact diagnosis of carcinoma is the biopsy specimen. When the microscopic examination of pleural fluid is positive, this part of the study must be made by qualified persons, as debatable interpretation will lead to false treatment. In so serious a condition as carcinoma, the less doubt on the diagnosis the better. The bronchoscopic study of the bronchial tree with biopsy represents the final approach to the diagnosis. The observer can see the location of the tumor, color, size, etc. If the location of the tumor is sufficient distance from the carina, then surgical removal might be considered.

THORACOSCOPY

Occasionally when there is fluid in the pleural cavity this can be replaced with air; then by introducing an operative thoracoscope it is possible to not only see the tumors on the pleura and visceral portion of the lung, but specimens can easily be removed.

The aspirated fluid is centrifuged, the cells are embedded in paraffin, hardened, then sectioned and stained. This procedure has given many positive diagnoses when other means failed.

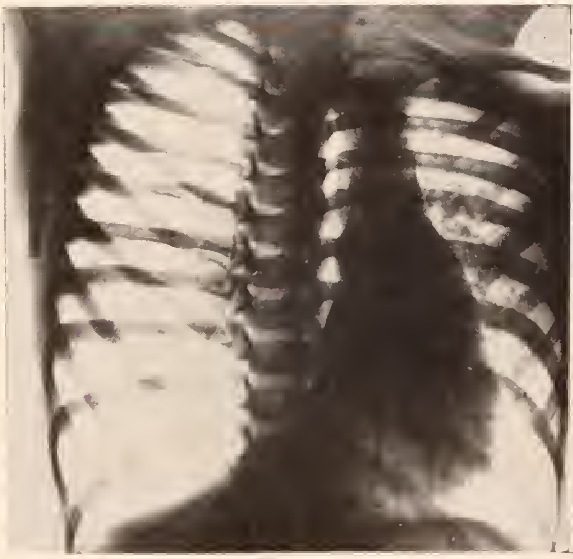

Fig. 4

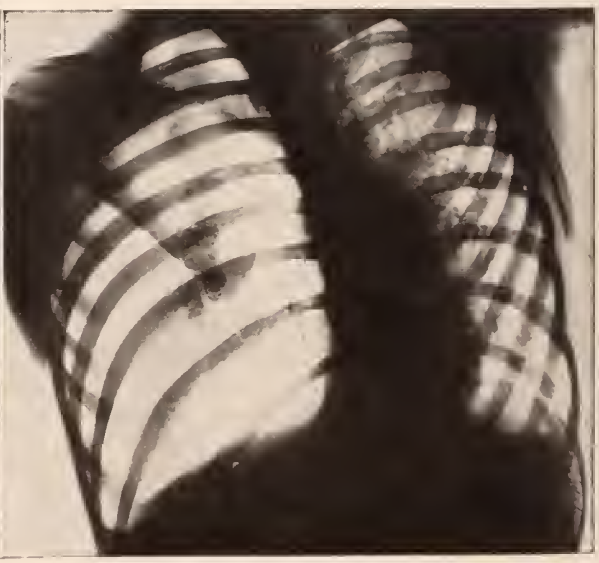

Fig. 5

Fig. 4.—R. G. Apparent large pneumothorax in the right chest cavity, crowding left lung. See Fig. 5.

Fig. 5.—Lipiodol outlines small main right bronchus; this photograph was obtained by tangential view only. The oil was introduced by the aspiration method.

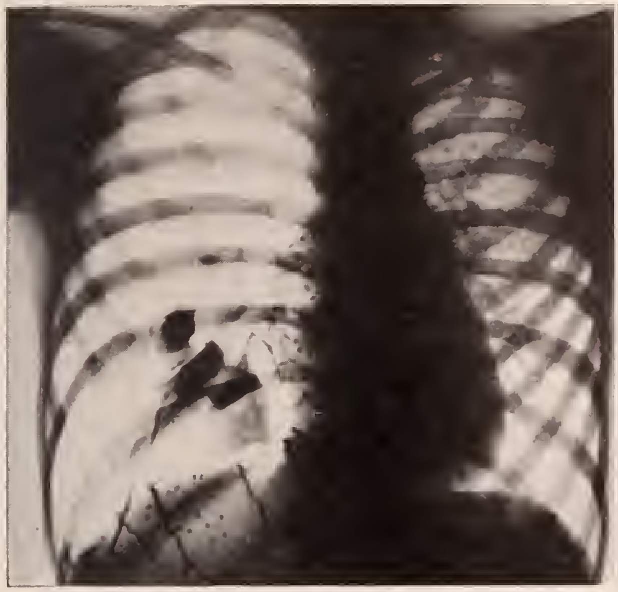

Fig. 6

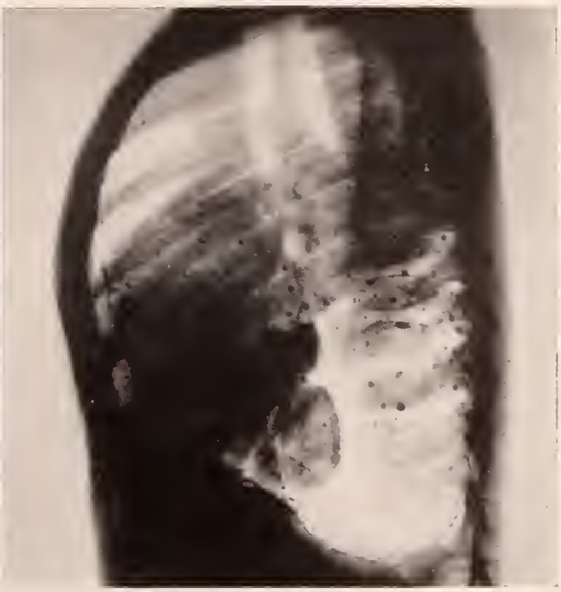

Fig. 7

Fig. 6.—Oil outlines numerous intercommunicating cysts—some large, some small—with trabeculae (pathognomonic of cysts). Note no spill-over in other lung.

Fig. 7.—Lateral view showing the walls of various cysts with droplets of oil adhering to walls in many areas.

CYSTS OF THE LUNG

The great interest recently manifested in cystic disease of the lung has shown that cysts are more common than were suspected. It has been evident to those interested that certain abnormalities of the chest, such as congenital cysts, abscess lung, spontaneous pneumothorax and some large bronchiectasis, have not been absolutely correctly diagnosed; now the correct diagnosis can be made if congenital cysts are kept in mind.

We have been fortunate in having seen fourteen cases of congenital cysts of the lung in the past three years. In the earlier cases the diagnosis was not made at the time of the examination. The important diagnostic features are often not evident until complications arise, such as infections and spontaneous rupture of cysts with consequent pneumothorax and more or less displacement of the chest contents.

In a suspected case of congenital cysts we must depend primarily on roentgen-ray examination, particularly with the use of iodized oil, this substance being introduced into the lung by the aspiration method or by bronchoscopic control. When this method is used, one usually sees malformation of the bronchial tree. The lung tissues are decidedly abnormal, and often only a small amount of lung tissue is present and the large space in the chest is usually filled with air, but occasionally fluid is found with levels. If the main bronchus is closed, it will be necessary to introduce air (diagnostic pneumothorax) and probably iodized oil directly into the cyst cavities. By turning the patient in various positions, the oil outlines not

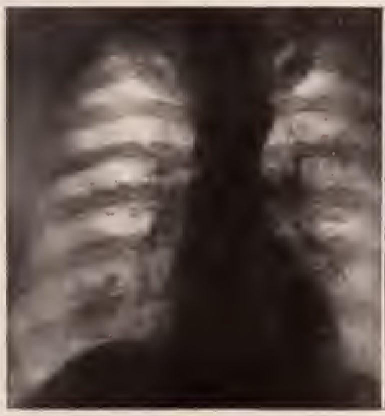

Fig. 8

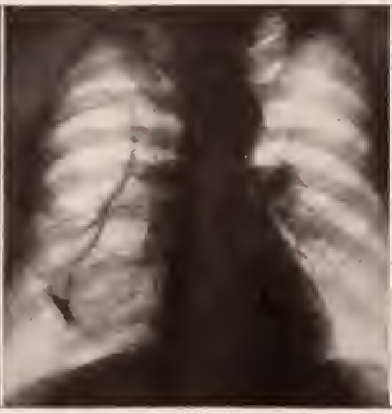

Fig. 9

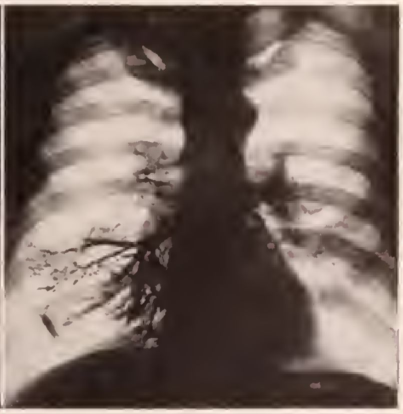

Fig. 10

Fig. 8.—B. S. Film taken March 4, 1930. The faint outline of cyst in right costophrenic angle. At this time only occasional wheezes were heard.

Fig. 9.—November 5, 1934. Shows many cyst walls with small pocket of pneumothorax in extreme right base. Emphysematous cysts or giant bullae.

Fig. 10.—November 14, 1934. Lipiodol shows right lower lobe with compressed bronchi, with no oil in cysts. (Openings into cysts are so tiny that a ball-valve action must have been present.)

only the cyst walls, but the fine irregular bands within the cavity are noted.

Some of the most dramatic pictures we have seen are produced by the use of iodized oil and the true anatomical conditions are easily demonstrated. By diagnostic pneumothorax we can push over the contents of the chest cavity with the cysts and the malformed lung.

In a recent case seen, a spontaneous pneumothorax with marked displacement developed following rupture of the cyst. This was followed by an effusion. When the fluid and air were aspirated, the cyst walls became adherent to the chest wall, obliterating the pleural cavity. No further spontaneous pneumothorax developed. The patient has been clinically well since, although the cysts remain.

This accident suggested a treatment for the recurring rupture of cysts; that is to produce an artificial pneumothorax and introduce lipiodol or gomenol to produce a slight pleuritis which may result in a symphysis of the pleural leaves.

Another suggestion for treatment is the cauterization of the main bronchus leading to cysts. Complete closure of the bronchus would prevent further air from entering cysts, so that the air within would be absorbed and the cavity collapsed.

Theoretically, this is good, but practically I believe that only in exceptional cases would the desired effect be produced.

In several cases where spontaneous pneumothorax developed, the cysts did not collapse, but were forced into the opposite side. Furthermore, in one case a thoracoplasty and phrenicectomy produced the same result.

In infected cysts the treatment has been drainage and removal en masse.

COMMENT

Sauerbruch states that upon a development basis it is conceivable that a bronchus may be "tied off" when the lung is being enveloped by pleura, and that if a large bronchus should be so affected, then a large cyst of the lung should result. If the middle-sized bronchi should be involved, then smaller cysts should develop and, if this typing-off should occur during the last intra-uterine development period, then multiple small cysts or congenital bronchiectasis should be the result. A superimposed infection, measles, scarlet fever, whooping-cough, would make evident the underlying condition, and we should then have bronchiectasis as it is seen clinically. As we have noted in the preceding paragraph, however, it is difficult to understand how air can be present in the cysts if the bronchi are obstructed during intra-uterine life.

During prenatal life the future respiratory passages are filled with a liquid (presumably amniotic fluid). Before breathing, the living cells of the alveoli are irregularly cuboidal with round nuclei. After respiration has occurred, the nuclei become spaced farther apart, the cytoplasm drawn out, and the cells appear very flat and thin. The blood vessels then become distended and more conspicuous.

There is some evidence which strongly suggests that even during intra-uterine life respiratory movements occur at times, and that these attempts at respiration must result in the aspiration of more amniotic fluid into the lungs. This occurrence, however, is not incompatible with a normal existence after birth. Graham showed, experimentally on guinea pigs, that if even a moderate degree of asphyxia of the fetus is produced, respiratory movements occur which, if the asphyxia is sufficiently extreme, pass into general convulsions. If the fetus is near term it may develop normally, after delivery by cesarean section, despite vigorous respiration of fluid into the lungs. The explanation of how the animal can live after the aspiration of the fluid is perhaps to be found in the fact that the lungs do not become fully distended with expanded alveoli until after air has been breathed, and that the comparatively small amount of liquid which is aspirated is not sufficient to prevent the proper degree of inspiration of air to carry on respiration. Of interest in this connection are the experiments of Geyl, who injected dyes experimentally into the amniotic sacs of animals.

Ewart, Wilson, and others, have shown that the lung of the child is just as complex in structure as that of the adult. Subsequent growth apparently depends upon an increase in the size of the alveoli without any addition to their number.

DEVELOPMENTAL ANOMALIES

According to Hueter, many of the cases of so-called congenital bronchiectasis are due to developmental anomalies in the bronchial tree. If the arrest in development is early, only large bronchi are formed and the rest of the lung may be a sac.

REPORT OF CASES

Case 1.—N. D. The patient concerned is an 18 months old male child who developed an acute attack of dyspnea, cyanosis, spasmodic cough and fever at the age of fourteen months. This attack followed an acute upper respiratory tract infection. Before the child was seen by us, the mediastinal contents were found to be displaced to the right, and closed drainage of the left pleural cavity, low down, was established elsewhere. No improvement followed the above procedure, and the tube was withdrawn after a few days. The skin wound healed over. A bronchoscopic examination at this time was negative. From then on the child obtained some temporary relief as a result of daily aspirations of over 1,000 cubic centimeters of air from the left upper chest. A fluoroscopic examination at the Barnes Hospital on August 5, 1931, which was about twelve weeks after the onset of the child's illness, still revealed the fact that the mediastinal contents were displaced to the right. The left diaphragm showed paradox movement. This fact, together with the above, suggested that the air pocket above the left diaphragm was a tension pneumothorax. A needle was introduced high up in the left upper chest. The pressures were plus 20 and plus 18. Eight hundred cubic centimeters of air were then withdrawn with the aid of a pneumothorax apparatus. The pressure then registered plus 6 and plus 4. The mediastinal contents had returned to their normal position. The child experienced great relief from this aspiration. Six cubic centimeters of lipiodol were then introduced through the same needle. The oil dropped to the bottom of one of the cysts of the left lung, and under the fluoroscope one could see the oil run over both main bronchi into the opposite lung. The air pocket over the left diaphragm failed to be injected. The lipiodol injection demonstrated beyond doubt that the condition was one of bilateral congenital cystic disease of the lung. This type of cystic disease is often considered to be a form of bronchiectasis, and is frequently associated with smaller dilatations and with acquired bronchiectasis. The latter develops as the result of repeated infections. A communication from Doctor Croswell on September 24, 1931, stated that the child had developed a left-sided pleural effusion and that the mediastinal contents had returned to their normal position following the aspiration of a small amount of fluid. Further aspirations of air then became unnecessary. The perforation in one of the cysts, which was allowing the escape of air into the left pleural cavity, had undoubtedly become sealed off.

* * *

Case 2.—R. G. Patient is a seven-year-old male child, admitted to St. Louis Children's Hospital April 3, 1934.

P. I.: Loss of appetite, irritable, loss of weight, dyspnea. Measles at five months. Fell from high chair at eighteen months. On examination a pneumothorax was found to be present. Air aspirated frequently without permanent benefit.

April 4, 1934.—A needle was introduced in right chest and manometer readings taken, initial pressure minus 3 minus 7, and 40 cubic centimeters of air were withdrawn; final pressure minus 10 minus 7. The reading here would lead one to believe needle in pleural cavity and not a cyst. On fluoroscopy no evidence of an air pocket between the cyst wall and parietal pleura was found.

April 5, 1934.—Bronchoscopic examination by Dr. M. F. Arbuckle. Trachea was markedly displaced to the left and compressed so that the lumen was one-eighth of the usual size, and was in a figure-of-eight with the center of eight solid, *i. e.*, the right wall of the trachea was pushed over into contact with the left wall. Lower down, the right lung was pushed over so that the view of the carina was effaced. The bronchoscope could not be inserted in the right bronchus; however, the instrument was passed readily into the left main bronchus.

April 7, 1934.—Vital capacity, 500. Hemoglobin, 80 per cent; red blood cells, 5,600,000; white blood cells, 8,000. Urine negative.

April 10, 1934.—Lipiodol injected into lung through the larynx. Found only a rudimentary bronchus (see Fig. 5). Twenty cubic centimeters of lipiodol were introduced into the cyst. The patient was turned on the stomach, on the back, and then sat upright. X-ray films show that there were many cysts of varying size with all communicating with each other. Thin trabecula are noted in lower cysts, and some of the pockets are heavily filled with the iodized oil. The exact nature of the condition is beautifully noted by the films taken in various positions. I have several times had occasion to insert a thoracoscope directly into the cysts, and found the condition present as outlined.

This boy, after the introduction of oil into the pleural cavity, developed symphysis of the pleural leaves, and has in the past three years been clinically well, although cysts are still present, but as long as the left lung compensates, and no infection takes place in the cysts themselves, he will remain well.

* * *

Case 3.—B. S. This 45-year-old male was admitted to the hospital November 14, 1934, with a history of wheezes, orthopnea, and cough for the past four years. Diagnosis of asthma was made on the basis of these symptoms. There was a strong familial history of asthma. Of late the patient has become increasingly short of breath on exertion.

In 1929 he had the first attack of so-called asthma, but physical signs were indefinite. A film (see Fig. 8) was taken. No suggestion of cysts was recognized by his physician at that time, but in the light of present condition the dense streak in lower right base was the outline of the first cyst. This patient was accustomed to severe physical exertion—horseback riding, tennis, golf, walking, etc. It was not until 1934, in August, when he had severe pains in the right chest that the true condition was noted. On examination by his doctor a right partial pneumothorax was discovered. A physical examination revealed diminished breath sounds in both lungs with hyperresonance; no increased whisper. Fluoroscopy and x-ray showed large emphysematous cysts of right lung with rupture at the base (spontaneous pneumothorax). Lung tissue was seen through the cysts. Evidently the cyst had ruptured and the air confined to the base, because of adhesions in the upper portion of the chest. Lipiodol did not enter the cysts, but many bronchi showed blocking with air trapped beyond it (obstructive emphysema). No attempt was made to aspirate the air from pneumothorax pocket because of the small amount present.

The emphysymatous blebs became larger and even intercommunicated. The pressure exerted on the other portions of the lung produced the dyspnea.

Treatment: No medical treatment for this type of cyst other than symptomatic.

The most important consideration is to limit activity to the lowest threshold.

519 University Club Building.

A MEDICAL SURVEY OF ONE THOUSAND WORK RELIEF PERSONS*

CERTIFIED FOR WORK RELIEF IN SAN FRANCISCO: PERIOD OCTOBER 2 TO 19, 1935

By Albert E. Larsen, M.D.
San Francisco

This survey was made to acquaint ourselves with the physical condition and medical problems among the people on relief. The San Francisco medical plan, with its centralization of all medical information of people on relief, with a part-time medical staff familiar with the workings of the relief administration, offered ideal facilities for such a study.

PRELIMINARY QUESTIONS

An examination blank was designed to bring to light statistically several of the major medical problems about which there seemed to be some controversy. At the same time, it was thought advisable to investigate several of the major public health problems that, theoretically, would exist in such a group. The questions were taken by an interviewer just preceding the actual medical examination. They read as follows:

1. Number of people in the family under the age of six? Are they vaccinated?

This question was designed to ascertain whether or not the preschool child was able to have the advantage of immunologic procedures so important to the individual and the community at large.

2. Anyone chronically ill in the family? Cough? This was designed to bring out possible hidden cases of tuberculosis.

These two questions, if answered in the affirmative, were sufficient cause for medical-social investigation, after which a proper dispensation of the problem would be effected.

3. Have you been ill during the past six months? Designed to determine the approximate incident of illnesses in the group.

Following this question the applicant was asked: Have you been under the care of a private physician? If so, have you been able to pay him in full, partially, or none? The purpose of this question was to learn where these people were accustomed to go for medical care, and to determine in what measure the relief load was economically dependent on the medical profession.

The applicant was then asked if he had attended a clinic—the name and his out-patient number. This would show again the economic

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* From the office of the Medical Director, Central Medical Bureau, San Francisco.

TABLE 1.—*Analysis of the Survey of One Thousand Work Relief Persons in San Francisco*

Number of cases	55	55	55	56	194	195	195	195	Totals in Per Cent
MEDICO-SOCIOLOGIC FINDINGS									
Under 6, not vaccinated	2	0	0	0	5	4	5	1	1.7
Individual ill during past six months	20	31	22	27	86	100	57	101	47.4
Member of family chronically ill	4	4	3	6	17	12	8	14	6.8
Accustomed to use clinic care	17	20	17	25	66	67	64	61	33.7
Accustomed to use private physician	2	0	0	0	6	3	0	0	1.1
Paid physician in full	1	0	0	0	1	1	0	0	.3
Paid physician partially	0	0	0	0	1	1	0	0	.2
Paid physician none	1	0	0	0	4	1	0	0	.6
Illness a factor to seek relief	3	5	6	6	24	36	25	29	13.4
AGE AND RACE (Per Cent)									
65 and over	9	9	6	11	40	43	28	40	18.6
55 to 64	19	19	11	19	58	48	50	51	27.5
45 to 54	8	14	19	12	47	42	49	38	22.9
35 to 44	10	8	14	7	25	36	32	46	17.8
25 to 34	7	2	4	7	19	21	28	16	10.4
Under 24	2	3	1	0	5	5	8	4	2.8
Male	49	42	45	52	159	162	181	175	86.5
Female	6	13	10	4	35	33	14	20	13.5
Negro	1	3	1	0	5	8	0	4	2.2
Oriental	2	2	4	2	11	12	10	11	5.4
White	52	50	50	54	178	175	185	180	92.4
COMPLAINTS									
Asthma	1	2	1	2	2	3	1	4	1.8
Bronchitis	3	5	4	2	16	13	8	10	6.1
Tuberculosis	2	0	0	1	1	5	5	2	1.4
Cardiac symptoms	7	11	9	13	37	45	25	44	19.1
Gastro-intestinal	3	11	10	7	25	24	12	23	11.5
Hemorrhoids	1	2	4	1	15	7	6	5	4.1
Peptic ulcer	0	0	0	0	0	0	6	3	.9
Nervousness	4	2	2	2	7	8	8	20	5.3
Epilepsy	0	0	0	0	1	1	1	0	.3
Syphilis	1	1	2	1	0	5	4	3	1.7
Rheumatism	1	11	8	9	40	28	29	37	16.3
Back strain	4	1	1	5	4	13	8	26	6.2
Pelvic disease	1	0	1	0	5	5	4	3	1.9
Genito-urinary	2	3	5	8	23	16	16	26	9.9
PHYSICAL FINDINGS									
Body build, average	30	25	34	39	117	121	134	121	62.1
Body build, overweight	15	13	10	6	39	30	21	18	15.2
Body build, frail	9	13	10	11	33	40	39	56	21.1
Marked malnutrition	1	4	1	0	5	4	1	0	1.6
Eyes good	27	24	38	30	109	131	137	134	64
Eyes defective	8	6	3	7	16	25	26	30	12.1
Eyes using glasses	20	25	14	19	69	39	32	31	24.9
Mouth Hygiene: Good or fair	30	34	33	37	132	131	138	140	67.5
Poor	25	21	22	19	62	64	57	55	32.5
Wearing dentures	0	2	5	7	21	11	11	9	6.6
No teeth	0	0	4	1	7	3	4	3	2.2

TABLE 1.—*Analysis of the Survey of One Thousand Work Relief Persons in San Francisco (Continued)*

Number of cases	55	55	55	56	194	195	195	195	Totals in Per Cent
Hearing impaired	8	3	3	6	26	8	9	23	8.6
Goiter	0	1	0	0	2	1	1	2	.7
Chest pathology	8	3	1	1	11	16	10	10	6.0
Cardiovascular system: Pulse over 90	2	6	2	7	18	11	4	11	6.1
Pulse irregular	1	2	1	2	6	6	3	6	2.7
Heart enlarged	0	1	0	3	8	3	9	9	3.3
Murmur at apex	4	8	5	2	13	15	10	11	6.8
Murmur at aorta	4	1	0	2	5	4	2	1	1.9
Systolic blood pressure over 150/100	13	23	10	18	59	58	45	45	27.1
Central nervous system pathology	0	0	2	1	6	6	8	9	3.2
Mental aberration	2	0	2	0	2	1	0	2	.9
Abdominal pathology	1	0	1	2	3	5	2	4	1.2
Arthritis	1	1	5	5	16	11	17	17	7.3
Loss of extremities	2	0	0	0	3	1	1	2	.9
Impaired function extremities	0	0	5	6	10	20	15	19	7.5
Hernia	3	6	1	9	23	28	22	12	10.4
Varicose veins	7	6	3	8	15	18	22	16	9.5
Skin conditions	2	0	1	3	9	5	5	4	2.9
Senility	1	1	1	4	12	20	17	28	8.4
Miscellaneous	Blind, 3; measles, 1; diabetes, 4; pellagra, 1; alcoholic, 3; morphin addicts, 2; Hodgkin's disease, 1; cancer, 2; pernicious anemia, 1.								
PHYSICAL CLASSIFICATIONS									
A	14	14	19	14	47	41	65	54	26.7
B	20	18	20	13	58	63	54	56	30.2
C	21	23	16	29	77	70	69	60	36.5
D	0	0	0	0	12	21	7	25	6.5
Treatment indicated	4	5	4	0	19	26	14	12	8.4
Refer to medical social service	1	0	0	0	1	4	5	1	1.2

NOTE: The findings are listed in sample groups taken consecutively for one thousand cases. This is done to show the consistency with which certain history and physical findings appear.

load private agencies might be expected to carry. It also was of medical value should the applicant become a patient of the E. R. A. His former medical record would then be automatically requested, obviating reduplication of medical time and costly medical procedures.

The last question, "Was illness a factor in causing you to seek relief?" has many medicosociologic implications, such as the cost of medical care, the incidence of disabling diseases, and the community's responsibilities. No attempt was made to break this question into its many possible ramifications.

THE MEDICAL EXAMINATION

On the completion of this questioning, the person was examined by a physician. A detailed, clinical history, with particular emphasis on the patient's present condition, was noted. A complete physical examination was then made.

If the applicant gave a history of being on relief, and had been a patient of the Central Medical Bureau, his medical record was gotten, to supplement the physician's examination.

CLASSIFICATION OF PERSONS EXAMINED: FOUR GROUPS

At the conclusion of the examination the physician was called upon to classify the individual into one of four types—"A," "B," "C," or "D."

While recognizing the difficulty in many instances of so classifying individuals into types, it was nevertheless necessary to define each that a standard could be established.

An "A" type is physically robust and organically sound.

A "B" type is physically frail, but organically sound.

A "C" type is one with a demonstrable organic lesion, such as hernia, varicose veins, heart murmur, etc., not producing symptoms.

The "D" type has a demonstrable organic lesion which would interfere with the normal activities of the individual concerned.

While the fundamental object of such a classification is to define the ability of an individual to work, it cannot define what type of work the applicant could perform. This decision must eventually rest with intelligent placement procedures. The "A," "B" and "C" types are eligible for placement. The "C" type must be placed in work which would not aggravate the ailment found on physical examination. The "D" types are presumably unemployable.

MEDICAL RECORDS

The medical record is meant to be part of the social service case history, and should be used in conjunction with the individual's employment history before a final decision of case dispensation can be made.

The one thousand cases thus examined represent the natural intake flow from October 2 through October 19, 1935, with the addition of a small percentage of individuals on relief requiring reconsideration of their work status. During this time there were no major labor moves such as strikes, which might have altered the type of individual examined. The appended chart shows the findings as they appeared during the course of study.

The headings used are general in nature, but represent the results of detailed questioning and weighing of evidence on the part of the examining physician. Thus:

Cardiac symptoms means that in the opinion of the physician the individual was not able to perform ordinary physical exertion without distress, shortness of breath, swelling of the ankles, heart pain, dizzy spells, or fainting attacks.

Gastro-intestinal symptoms include "indigestion," abdominal pain, gas on the stomach, diarrhea, nausea and vomiting, etc., of sufficient intensity and duration to warrant being called abnormal.

Rheumatism includes lumbago, aching, stiff or swollen joints, and neuritis, of sufficient intensity and duration to warrant being called abnormal.

Genito-urinary complaints on the same basis refer to prostate disease or possible kidney complaints.

Backstrain includes a definite history of injury, after which there may have been a recurrence when subjected to heavy labor, and the chronic type of backache on a postural or rheumatic basis, or for some undetermined cause.

Nervousness is difficult to evaluate on an examination with limited time. It was noted positive when there was a history of a nervous breakdown, nervous wreck, "nerves" and "worries."

In the physical examination:

Poor mouth hygiene means in most instances extensive pyorrhea, cavities, tooth snags and uncleanliness, to a sufficient degree to be evidenced by a single glance.

Impaired hearing is noted only when the impairment is of such a degree as to interfere with conversation at slightly increased voice intensity.

Chest pathology may include râles in the chest, asthmatic squeaks, chest deformities, changes produced by tuberculosis or by congestion from a failing heart.

Irregular pulse means frequent dropped beats or complete irregularities, such as auricular fibrillation.

Blood pressure positives include all cases with systolic blood pressures over 150 and diastolic pressures over 100.

Central nervous pathology indicates paralysis, Parkinsonian tremors and abnormal reflexes.

Mental aberration is noted when the physician is impressed with a marked personality change, such as "peculiar," paranoid tendencies and senile mental changes.

Abdominal pathology is noted when there is a tenderness supported by a history of gastro-intestinal symptoms or an enlarged organ such as liver or spleen.

Arthritis includes swollen joints, tender spine, tender sacroiliac joints and deformities on an arthritic basis.

Impaired function includes stiffened joints, paralysis, loss of fingers, deformities from burns and poorly-set fractures, or any condition which would be a handicap to an individual performing manual labor.

Impaired vision ranges from loss of sight in one eye, impaired because of cataracts, or marked refraction errors not corrected with glasses.

Skin diseases include scabies, pediculosis, ulcerations, impetigo, and eczema.

Senile is used where marked arteriosclerosis is noted, together with a general appearance of feebleness.

Miscellaneous are definite disease entities either diagnosed by the examining physician, given as the individual's statement, or taken from a former medical record.

Treatment necessary is noted when there is some condition present which the physician feels should have care immediately, such as infected wounds, an infectious disease, diabetes, tuberculosis, and in conditions where the physician is not satisfied with his examination and would like to have the benefit of possibly an x-ray, Wassermann, etc., before passing judgment.

THE CHART NOTATIONS

There are several points in Table 1, which, though self-evident, should be emphasized. Of the 47.4 per cent of people who claim to have had some illness during the past six months, 33.7 per cent sought clinic care, while 1.1 per cent sought advice from a private physician. This leaves a balance of 15.6 per cent who, while claiming to have been ill, had not sought medical care.

The high percentage of cardiac symptoms may be accounted for by the high percentage of people falling into the age group over 45—69 per cent, where most cardiac pathology is apt to appear. The high incidence of rheumatism and gastro-intestinal symptoms probably has a similar explanation. The poor food habits of people on relief must also be considered to have a possible etiologic significance. The genito-urinary percentage—9.9 per cent—may also be accounted for by the age group and the male predominance; for in most instances the complaint is related to possible prostate disease. In the physical examination poor mouth hygiene is an outstanding finding. The 32.5 per cent whose mouths are in such bad condition present a major public health problem.

The incidence of high blood pressure may again be explained by the age group, where it is expected to find a high incidence of hypertension.

The high incidence of hernia and varicose veins represent conditions which are amenable to treatment. Their treatment is costly and time-consuming. Their presence closes to the individual the ordinary outlets of employment. It suggests an economic and medical question of considerable importance since 20 per cent of the employable people have either one or the other, or a combination of both.

FINAL RESULTS OF THE SURVEY

The final results of the survey show 26.7 per cent Class "A," 30.2 per cent Class "B," 36.5 per cent Class "C," and 6.5 per cent Class "D." The percentage of Class "C" type is considerably higher than expected. It explains in a measure the 13.4 per cent of the people who have sought relief because of illness. Their ailments are a definite handicap in competing with others for positions available in private industry.

The sampling statistics show a remarkable consistency from one group to another, which suggests that a similar condition probably exists throughout the entire group of the unemployed.

It is possible, therefore, that the existence of this "C" group is in a measure responsible for the persistence of the present relief load.

Russ Building.

MAPHARSEN: ITS USE IN THE TREATMENT OF SYPHILIS*

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Discussion *by Chauncey D. Leake, Ph.D., San Francisco; George V. Kulchar, M.D., San Francisco; Ernest H. Falconer, M.D., San Francisco; Howard Morrow, M.D., San Francisco.*

Mapharsen is chemically meta-amino-para-hydroxyphenylarsin oxid and is a trivalent arsenical identical with arsenoxid. This drug has been recently introduced by Dr. O. H. Foerster and his associates [1] for the treatment of human syphilis.

In this report we wish to present our observations on the clinical use of mapharsen in the treatment of syphilis for the period of March, 1934, to the present time.

HISTORICAL BACKGROUND AND REVIEW OF THE LITERATURE

Ehrlich [2] synthesized arsenoxid about 1912 while working on the arsphenamins. He thought it was too toxic for clinical use. It was put aside until 1920, when Voegtlin and Smith [3] showed that the arsphenamins formed arsenoxid when oxidized in the tissues, and that this product was the active treponemacidal agent of the drug. Voegtlin considered its possibilities for clinical use, but abandoned the idea because the maximum tolerated dose seemed to be too nearly the minimum curative dose for safety. Rosenthal [4] showed that only 10 to 12 per cent of arsphenamin is converted into arsenoxid within the body. In 1934, Tatum and Cooper [5] reinvestigated its use in experimental syphilis and experimental trypanosomiasis, and showed that the pure arsenoxid was not dangerously toxic and possessed a therapeutic index greater than neoarsphenamin. They designated the drug as "mapharsen," from its long chemical term: *m*eta-*a*mino-*p*ara-*h*ydroxyphenyl*arsine* oxid.

Raiziss and Severac [6] recently found that the therapeutic index of neoarsphenamin was three times greater than that of arsenoxid in experimental trypanosomiasis, and five and a half times as efficient as arsenoxid in experimental syphilis of rabbits. They state that in experimental syphilis of rabbits the maximum tolerated dose and the minimum curative dose for arsenoxid are very nearly identical, which suggests that the clinical use of this drug in adequate curative doses might be fraught with considerable danger.

In a recent paper, which deals with the experimental use of mapharsen in animals, Gruhzit [7] reported that the drug was not found to be toxic to the kidneys, did not produce albuminuria, or elevate the total nonprotein nitrogen of the blood or the blood sugar. For Treponema equiperdum infection in rats the therapeutic indices for mapharsen, arsphenamin, and neoarsphenamin were found to be 18, 14, and 9, respectively. The therapeutic indices in syphilis in rabbits were 7 and 5, respectively, for mapharsen and neoarsphenamin. The sterilizing indices in single doses were about 4 for mapharsen, and 3.75 for neoarsphenamin, while in repeated doses given once weekly for three weeks the respective indices were 4.6 and 1.67 for mapharsen and neoarsphenamin. Thus with single doses the sterilizing indices were about equal, but with repeated doses mapharsen appeared superior to neoarsphenamin. The experimental work further indicated that 1.0 milligram per kilogram of body weight was tolerated well and was the optimum dose for prolonged use.

Foerster and his associates have conducted a clinical trial of mapharsen in the treatment of syphilis. They used the drug alone, unsupported by other therapy, in a series of eighty cases, of which twenty-three patients were treated for twelve to eighteen months. They found that the drug was tolerated well and without serious toxic effects, and that it possessed antisyphilitic properties which justified more extensive study.

CLINICAL OBSERVATIONS

Upon the basis of the clinical and experimental work reported above, the use of mapharsen was begun in the outpatient department of the University of California Hospital in March, 1934. In order to determine the therapeutic efficiency of the drug, mapharsen was substituted for neoarsphenamin in the schemes of treatment for various forms of syphilis, which consisted of alternating courses of the arsenical and bismuth salicylate. The dosage of mapharsen employed was .04 gram dissolved in 10 cubic centimeters of distilled water for females, and .06 gram for males—approximately one-tenth of the amount of arsenic as in the equivalent dose of neoarsphenamin.

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PATIENTS UNDER TREATMENT

To date four hundred patients have received 13,240 injections of mapharsen, totaling 662 grams. Of this group, many are unsuitable subjects for a study of the therapeutic value of mapharsen because some of these patients had received various kinds of antiluetic therapy before coming to the clinic; many had already been under treatment with neoarsphenamin; and some disappeared or were transferred to care elsewhere. Of this number, sixty-three were treated with mapharsen as the only arsenical. While the results obtained with the rest of the group do not give exact information as to the therapeutic effectiveness of mapharsen, a study of this clinical data does show certain valuable facts as to the toxicity and general tolerance of the drug:

Sixty-three received mapharsen as the only arsenical; 293 received both mapharsen and neoarsphenamin, and tolerated both drugs equally well; 31 did not tolerate neoarsphenamin, and did well on mapharsen; 6 tolerated neither drug well; 2 did not tolerate mapharsen well, but did well on neoarsphenamin; 5 could not tolerate any form of arsenic (neoarsphenamin, mapharsen, or bismarsen). Total number of patients in the series of cases investigated was 400.

GROUP RECEIVING MAPHARSEN AND BISMUTH

Of special interest is the group of sixty-three patients who received mapharsen only as an arsenical, together with bismuth intramuscularly. Thirty-four of these have become and have remained blood-Wassermann and Kahn-negative. Twenty-nine are still under treatment and are progressing satisfactorily, but their blood-Wassermann and Kahn reactions have not yet become negative. Analyzing the thirty-four cases, we find:

Four cases, seronegative primary syphilis; all remained serologically negative.

Nine cases, seropositive primary syphilis; blood-Wassermann and Kahn reversal in an average of 4.1 months.

Fifteen cases, secondary syphilis; blood-Wassermann and Kahn reversal in an average of 7.8 months.

Six cases, latent syphilis; blood-Wassermann and Kahn reversal in an average of 14 months.

Table 1 shows the average number of injections of mapharsen and bismuth salicylate which were given before the blood-Wassermann and Kahn reversal occurred:

Table 1.—*Average Figures for the Above Group of Cases*

Diagnosis	No. of Injections of Mapharsen	Total Gm. Mapharsen	Total No. of Injections of Bismuth
Primary ..	14.6	.81	12.9
Secondary	16.9	.84	15.1
Latent	24.3	1.29	37.3

Since the blood-Wassermann and Kahn tests were done at three to five months' intervals, a reversal may have occurred much sooner than is shown here. Thus these figures do not specify the earliest time of reversal.

COMMENT

In all the patients with early syphilis, the primary and secondary lesions responded rapidly to mapharsen. The chancres showed healing in forty-eight hours, and were nearly imperceptible in fifteen days. The cutaneous lesions involuted promptly, usually disappearing within one to two weeks. Thus the visible lesions of early syphilis responded rapidly to mapharsen, and this is comparable to the response seen with neoarsphenamin. There have been no clinical or serologic relapses up to the present time in patients adhering to regular treatment.

From the above analysis of the total group, it is seen that the majority of patients (293) are able to tolerate both arsenicals equally well without untoward reaction.

Thirty-one patients did not tolerate neoarsphenamin well because of severe nausea and vomiting, and their dosage had to be repeatedly cut down to inefficiently small amounts. These patients were changed to mapharsen and were able to continue with an average-sized dose of the drug. Thus it would appear that mapharsen can be used in certain instances where neoarsphenamin is not tolerated. Certain patients are thus able to continue with an arsenical in a fair-sized dose. This would not be possible if mapharsen were not available.

In two patients mapharsen was not tolerated well, but neoarsphenamin was taken without discomfort.

Six patients were unable to tolerate an effective dose of either mapharsen or neoarsphenamin because nausea and vomiting followed the injections.

Five patients who had had an exfoliative dermatitis from neoarsphenamin had a recurrence of this dermatitis when given mapharsen in small doses, *i. e.*, .01 gram. It is of interest to note that in all of these patients the patch-tests for mapharsen were negative. These patients were apparently sensitive to arsenic in any form, since they reacted also to bismarsen intramuscularly, and one of them even to mercury salicylate.

UNTOWARD REACTIONS

The one unpleasant reaction peculiar to mapharsen is the dull, aching pain it produces along the course of the veins, persisting for a few minutes to several hours after the injection. This pain goes deep into the arm and shoulder, and sometimes downward into the forearm and hand. In none of the patients of our series was the pain sufficiently severe to cause discontinuance of the use of the drug. Attempts to lessen the severity of the pain by allowing the solution to stand for some time before injecting were unsuccessful. Patients complained less when the injection was given rapidly. No thrombosis of veins was noted in any of these patients.

Another untoward reaction encountered during the use of mapharsen is mild nausea and sometimes vomiting, which come on from fifteen minutes to two hours after the injection and last one-half to three hours. Refraining from the meal preceding the injection tends to lessen the occurrence of these symptoms. Most patients have this discomfort only following the first few treatments. As previously stated, these gastric upsets are much less common and less severe with mapharsen than with neoarsphenamin.

In the 13,240 injections given to four hundred patients, we have not seen a case of jaundice, recognizable by the icteric tint of either skin or sclerae. We did not note enlargement of the liver in any of these patients.

Not as common, but of more serious consequence is the complication of toxic skin reactions—the precursor of an exfoliative dermatitis. These appeared as pruritic erythematous eruptions which, after a few weeks' rest (using bismuth meanwhile) did not reappear upon resuming the mapharsen.

Purpuric eruptions, in the form of large widespread purpura, occurred with several trials of neoarsphenamin in two cases, but did not occur when mapharsen was given.

In this series mapharsen has caused no nitritoid reactions, no Herxheimer reactions of consequence, and no deaths.

CONCLUSIONS

Mapharsen is suitable for use in the treatment of syphilis when the proper dosage is employed. The amount of mapharsen required for therapeutic usefulness is generally well tolerated by the patient.

The drug is a potent antisyphilitic remedy, and should be studied further before its place in the treatment of syphilis can be definitely established.

SUMMARY

In a clinical trial upon four hundred cases of syphilis, it was found that mapharsen:

1. Is safe to use, as shown by the 13,240 injections given to four hundred patients.
2. Causes rapid healing of visible lesions.
3. Effects and maintains a Wassermann reversal within a reasonable length of time.
4. Is less toxic than neoarsphenamin.
5. Can generally be used where neoarsphenamin is not tolerated. Patients are thus able to continue with an arsenical in adequate dosage. This would not be possible if mapharsen were not available. ✓ yes. not dehydrocholate.
6. Causes no nitritoid reactions.
7. Causes no Herxheimer reactions of consequence.
8. Causes no deaths.

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REFERENCES

1. Foerster, O. H., McIntosh, R. L., Wieder, L. M., Foerster, H. R., and Cooper, G. A.: Mapharsen in the Treatment of Syphilis, Arch. Dermat. and Syph., Vol. 32, No. 6 (Dec.), 1935.

2. Ehrlich, P., and Hata, S.: Die experimentelle Chemotherapie der Spirillosen. Verlag von Julius Springer, Berlin, 1910.

3. Voegtlin, C., and Smith, H. W.: Quantitative Studies in Chemotherapy, J. Pharmacol. and Exper. Therap., 15:475, 1920; 16:199, 1920.

4. Rosenthal, S. M.: The Formation of Arsenoxide from the Arsphenamins in the Living Animal and in Test-Tube Oxidations, Pub. Health Rep., 47:933, 1932.

5. Tatum, A. L., and Cooper, G. A.: Experimental Study of Mapharsen (Meta-Amino Para-Hydroxy Phenyl Arsine Oxide) as Antisyphilitic Agent, J. Pharmacol. and Exper. Therap., 50:198 (Feb.), 1934.

6. Raiziss, George W., and Severac, Marie: Comparative Chemotherapeutic Studies of "Arsenoxide" (3-Amino-4-Hydroxy-Phenyl-Arsenoxide) and Neoarsphenamin, Am. J. Syph. and Neurol., Vol. 19, No. 4 (Oct.), 1935.

7. Gruhzit, O. M.: Mapharsen ("Arsenoxide") in the Therapy of Experimental Syphilis and Trypanosomiasis, Arch. Dermat. and Syph., Vol. 32, No. 6 (Dec.), 1935.

DISCUSSION

Chauncey D. Leake, Ph.D. (University of California Medical School, San Francisco).—An important point in considering the therapeutic hazard involved in the use of any drug is the margin of safety existing between the average effective dose and the minimum dose at which any toxic symptoms may appear. Mapharsen is certainly as safe as the arsphenamins when considered from this standpoint, and has many clinical advantages in reducing the possibility of nitritoid and Herxheimer reactions. It is very likely, as implied by Voegtlin's work, that these reactions are brought about in the gradual transformation of the arsphenamins in the body to arsenoxid or some other compound similar to mapharsen. Some of the commercially inspired criticisms of mapharsen point out that it is much more toxic than the arsphenamins. This is true from the standpoint of total toxic dosage, but not from the standpoint of the relation of the toxic to the effective dose. Mapharsen is effective in a much lower dosage than the arsphenamins, and has fully as wide, if not as wide, a margin of safety between the effective dose and the toxic dose. Mapharsen has been carefully developed on a sound pharmacologic and clinical basis, and constitutes a definite advance in drugs available for the treatment of syphilis. The report by Doctors Miller, Epstein, and Simpson is a sound appraisal of the drug from a critical and impartial standpoint.

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George V. Kulchar, M.D. (450 Sutter Street, San Francisco).—Doctor Epstein's paper is certainly most timely, as the place of mapharsen in the therapeutic armamentarium of syphilis is by no means as yet determined. Mapharsen has been used during the past two years in the syphilis clinic at Stanford in the treatment of early syphilis. Not feeling justified in relying upon a single drug, particularly one whose therapeutic efficiency was not established, mapharsen was used in combination with bismuth. Recently Dr. C. W. Barnett and I have surveyed our cases and found that the rate of involution of the primary and secondary lesions was slightly less than that commonly observed following neoarsphenamin. The rate of serologic reversal is, however, somewhat slower with mapharsen than with arsphenamin, and the percentage of central nervous system involvement following the treatment of early syphilis with mapharsen was at least equal to that observed with other arsenicals. The incidence of reactions following 1,270 injections of mapharsen was compared with that observed following an identical number of injections of neoarsphenamin. While pruritus, skin eruptions, and immediate reactions, including nitritoid, were slightly more frequent with neoarsphenamin, all other types of reaction, particularly nausea, vomiting, diarrhea and headache, were more common following mapharsen. Nearly one per cent of the injections was followed by venous thrombosis, often severe and extensive, which sometimes made it necessary to discontinue the use of the drug. The attempt to substitute mapharsen for neoarsphenamin in a patient who previously had had an arsphenamin dermatitis was followed by a recurrence of the dermatitis. In a few instances, however, the mapharsen could be substituted for neoarsphenamin in patients experiencing severe nitritoid reactions.

In our opinion mapharsen has not been clinically evaluated over a sufficiently lengthy period of time to advocate its general use in the treatment of syphilis.

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Ernest H. Falconer, M.D. (384 Post Street, San Francisco).—My interest in this clinical study of mapharsen is confined to the study of its effects on the blood and blood-forming organs. This work was carried out in the hematology clinic at the University of California Medical School, and the results are embodied in a paper which will appear in the near future. In connection with the statement of the authors that mapharsen may be substituted when a patient is sensitive to arsphenamin or neoarsphenamin, this point was well brought out in studies which we made on two patients very sensitive to neoarsphenamin; purpura hemorrhagica having occurred three times (once in each case experimentally) following small amounts of neoarsphenamin. In both of these patients, repeated doses of mapharsen produced no reaction and no untoward effects. One patient in the mapharsen series developed a partial marrow aplasia with suppression of marrow function after .26 grams of mapharsen. This patient had an initial blood count of: hemoglobin, 75 per cent; red blood cells, 4,470,000; white blood cells, 5,800; platelets, 200,000.

Our experience has taught us that a syphilitic patient having the degree of anemia shown above, with a depression of the white cells, should not receive arsphenamins of any type until the anemia is corrected. An exception to this rule would be where one had reason to suspect the anemia as being due to syphilis itself. Such instances are probably rare. In our studies no instances of purpura hemorrhagica due to mapharsen were seen, but it may occur in the future after more widespread use of this drug.

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Howard Morrow, M. D. (384 Post Street, San Francisco).—The report on mapharsen by Miller, Epstein, and Simpson has been so complete that there is little to add. At a recent meeting of the American Dermatological Association the subject was thoroughly discussed, and the reports concur with experiences published in this article. At the University of California clinic over 13,000 injections have been given in the past two years, and the results have been satisfactory. The fact that mapharsen can at times be used where neoarsphenamin is not tolerated makes it a very valuable addition to our list of antisyphilitic remedies.

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Hiram E. Miller, M. D. (Closing).—The discussion on this paper has emphasized many of the important points in regard to mapharsen. One of Doctor Kulchar's findings, however, seems to be at variance with those of other observers. It is difficult to explain his twelve cases of venous thrombosis in 1,270 injections. We observed none in over 13,000 injections, and Gruhzit recently reports on 75,589 injections of mapharsen in which only two cases were noted.

Most observers agree that the reactions following the use of mapharsen in properly adjusted doses are less severe than those after the arsphenamins. Mapharsen is considered to be a safe and useful drug. We do not, at the present time, recommend that it be used in preference to the arsphenamins. Its exact place in the treatment of syphilis can only be determined by further study and observation.

PORTAL THROMBOSIS*

By Edward C. Pallette, M.D.
Los Angeles

Discussion *by Charles A. Noble, Jr., M. D., San Francisco; Arthur S. Granger, M. D., Los Angeles; George H. Houck, M. D., Los Angeles.*

Thrombosis of the portal venous system, either of the portal vein itself or of one or more of its branches or radicals, although a rather rare condition, must be regarded as far from a medical or pathological curiosity. One seldom sees this diagnosis on the hospital chart; it is considerably more common, however, in the autopsy protocol. It is with a feeling that the clinical picture of portal thrombosis goes far too often unrecognized that this paper was attempted.

The first adequate description of the signs and symptoms of this condition was made by Langdon-Brown in 1901.[1] Unfortunately he,[2] as well as several later writers, failed to distinguish clearly the difference between the two main types of portal thrombosis, *i. e.*, that associated with infection or suppuration, instances of which type we have all seen not too infrequently, and, secondly, that developing blandly or aseptically. Since the two have actually entirely different signs and symptoms, a different pathological physiology, a different etiology, it is important first to discuss these differences.

INCIDENCE OF PORTAL VEIN DISEASES

In a recent report from the staff meetings of the Mayo Clinic, 127 cases of diseases of the portal vein were reviewed.[6] Of these, seventy-four were of the aseptic type. The 1921 Johns Hopkins Bulletin contains a report of twenty-one cases of portal thrombosis in 5,050 autopsies.[3] An older German report gives sixty-eight cases in about 25,000 autopsies. I herein report eight cases occurring during the past four years at the Los Angeles County General Hospital out of a total of 5,600 autopsies. The frequency of occurrence of bland portal thrombosis, then, appears to vary between 0.1 and 0.2 of 1 per cent of all cases coming to autopsy. Suppurative portal thrombosis, as we have mentioned, is much more frequently seen at autopsy; and since it is merely a part of a septic process also shared by the liver and other organs, it is, of course, often recognized and diagnosed clinically. Bland portal thrombosis on the contrary, is very rarely diagnosed clinically[5] and, if one may judge from certain autopsy protocols read in connection with this condition, not always recognized as the essential pathology present at autopsy. This is undoubtedly because the terminal lesions present, such as gangrene of the intestine with diffuse peritonitis, frequently obscure the picture of the original thrombosis.

SEPTIC OR SUPPURATIVE PORTAL THROMBOSIS

Also commonly called portal pyemia, or suppurative pylethrombosis. This type is not uncommonly seen, and before the days of early operation for appendicitis, was even more frequent. It is not difficult to comprehend how infection from a neglected appendiceal gangrene or abscess can enter the terminal mesenteric radicals of the portal vein. (It is rather more difficult to understand why this does not occur more frequently than it does.) Then, infected emboli are formed which ascend through the mesenteric veins, a septic pylephlebitis results in the portal vein and multiple abscesses form in the liver. The picture is one of sepsis throughout, and of course may result from infected or suppurating lesions of any organ discharging venous blood into the portal circulation. In this connection it is well not to overlook the umbilical vein (obliterated), the esophageal and the hemorrhoidal veins, as cases have been reported following umbilical infections in infants,[4] and in adults associated with posterior mediastinitis and perirectal infections.

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* Read before the semi-annual meeting of the Southern California Medical Society at Los Angeles, November, 1935.

To distinguish the course of suppurative thrombosis of the portal vein from hepatic abscess or suppurative cholangitis is often impossible, but in the presence of signs such a condition, associated with a septic focus in any region drained by the radicals of the portal system, septic thrombi in the portal vein or its mesenteric branches must be considered as being very possibly present. The picture differs from that seen in bland thrombosis, in that obstruction to the venous flow rarely occurs because of the soft friable type of the septic thrombus, and as a result ascites is exceptional.

ASEPTIC OR BLAND PORTAL THROMBOSIS

In referring to this type, Dr. William H. Welch speaks of occlusion of the portal vein as "a well characterized, although usually undiagnosed affection." Unfortunately, although some thirty-odd years have elapsed, we must still agree with his statement. In spite of a characteristic and clear-cut symptom complex based on a definite pathological physiology, this condition remains "usually undiagnosed."

By bland portal thrombosis we refer to that condition in which the lumen of either the main stem or the larger branches of the portal vein become filled with an uninfected thrombus, resulting in occlusion of that vein. The etiology, of course, varies greatly, but the essential etiology is that of thrombosis formation in general, and certain factors initiating this thrombus formation may be classed as:

1. Extrinsic.
2. Intrinsic.
3. Mechanical.
4. Chemical or toxic.

Under the heading of extrinsic causes, we may include pressure upon the vein by abdominal tumor, invasion of the vein by malignant growths, and pressure by impacted gall-stones or enlarged lymph nodes. Under intrinsic factors we speak of areas of venous sclerosis, inflammation and roughening of the intima of the vein. Under mechanical factors we mention slowed circulation of the blood due to cirrhosis of the liver (the most common lesion associated with bland portal thrombosis [3, 6]), chronic hepatitis and cardiac decompensation. Chemical factors are unproven, but it is well here to recall that portal blood may contain products from the digestive tract which have not yet become detoxified. I wish also to refer to my Case No. 1, in which the acute portal thrombosis apparently followed the ingestion of relatively large amounts of alcoholic beverage, and to say that Storch of New Orleans is allegedly reporting five cases of venous mesenteric thrombosis following acute alcoholism.[7]

The occlusion of the vein, then, regardless of the etiology, is responsible for the rather characteristic symptom complex to be described. The blood flow in the portal circulation is obstructed by the formed thrombus. It has been noted many times experimentally in dogs that, if the main trunk of the portal vein is ligated, the animal dies within two to three hours in a condition called "splanchnic shock." This has never been thoroughly explained, but it is apparent that the sudden alteration in blood flow in the splanchnic area produces an untoward stimulus to the abdominal sympathetic system which simulates fatal surgical shock. However, if the ligation is incomplete or done in stages so that the occlusion is not sudden, the animal does not die, but goes on to demonstrate a similar clinical picture to that seen in man in the presence of portal vein occlusion by thrombus. The portal circulation to the liver is slowly reëstablished by the development of a collateral circulation, which utilizes the obliterated umbilical and periumbilical veins, the falciform ligament, and the gastro-hepatic omentum particularly. In Case No. 1, reported later, this collateral circulation was very apparent at the time of the second laparotomy, one year following the acute portal thrombosis. It is so marked in the gastro-hepatic omentum that it has been likened, particularly in the German literature, to a cavernous hemangioma. It should be pointed out here that the collateral circulation in portal vein occlusion differs from that seen in pure cirrhosis of the liver, in that in the latter the circulation tends to be reëstablished in a hepatofugal direction, *i. e.*, away from the damaged liver into the peripheral circulation; whereas in portal vein thrombosis the collateral circulation is hepatopedal or around the occluded portion of the vein toward the still functioning liver.[5]

Thrombosis in a vein, of course, must necessarily occur suddenly. The amount and character of the pathological physiology produced must therefore vary only with the location of the occluding thrombus and its longitudinal extent. Unfortunately, it has been found that the primary thrombosis most commonly appears in the main trunk of the portal vein just as it enters the liver. As the forward motion of the blood is stopped, the thrombus propagates itself distally to include the large branches of the portal vein, namely the superior mesenteric and splenic veins. If this process does not occur too rapidly the collateral circulation, as above mentioned, may be sufficient to prevent fatal shock, but in the meantime a very dramatic and interesting clinical picture develops.

Probably as a result of venous back pressure, there is an onset of acute upper abdominal pain, sometimes colicky in nature, located in right upper quadrant and closely simulating gall-stone colic. Evidence of shock immediately appears, the degree of which depends, as we have said, upon the extent of the propagation of thrombus and the amount of the portal system involved. The pulse becomes rapid, weak, and thready, the blood pressure drops rapidly, and the temperature is subnormal. Within a very short time (in Case No. 1 within three house of the onset) an acute ascites develops. This is in the nature of a transudate, and results from the extrusion of the fluid elements of the portal blood from increased intravenous pressure in the obstructed portal circulation. The fluid then is clear yellow with a low specific gravity. This is only necessarily true in the early hours following the onset, however, as we shall see that later intestinal gangrene and ileus may change the character of the fluid. As the progress is observed the picture becomes more and more suggestive of an abdominal catastrophy. A marked leukocytosis is found. Cramp-like pains throughout the abdomen are followed by a blood-tinged diarrhea. Nausea and vomiting appear, the latter perhaps also containing blood. The bloody diarrhea is, of course, dependent upon the extension of the thrombus to involve the radicals of the superior mesenteric vein, producing a venous mesenteric thrombosis, ileus and, in many cases, intestinal gangrene and peritonitis. Blood in the vomitus is dependent upon the thrombus involving the splenic vein, which exhibits collateral circulation via the vasa breva. Death is the usual outcome in an acute portal thrombosis of any great extent, and may occur early as a result of shock, or later as a result of ileus, or intestinal gangrene with peritonitis.

It is, of course, true, however, that a goodly percentage of these individuals exhibiting thrombosis of the portal vein do not have as severe an attack as above outlined. This is because, as we have said, the process is less extensive in its involvement, and progresses slowly enough to permit adequate development of a collateral venous circulation. As one reviews the histories of individuals seen at the autopsy tables showing unmistakably ancient thrombotic changes in the portal vein and perhaps more recent thrombi in one or more of its branches or even in portions of the collateral circulation, one often finds that they have had one or more attacks of upper abdominal colic associated with transient ascites and often diarrhea. This type may be classed as a chronic thrombosis, and this is literally true in that from time to time further thromboses occur and the individual exhibits "critical episodes," or recurrent mild attacks of acute thrombosis, before succumbing, perhaps several years later, to incidental terminal sequellae which we shall now mention.

As we have said, the thrombosis tends to recur in individuals affected with this condition. Death may result in a spontaneous acute exacerbation from shock, ileus or peritonitis, or, as reported in several cases in the literature,[4, 6] it may follow splenectomy for a splenomegaly which quite constantly results from the thrombosis of the splenic vein. This splenomegaly may become quite marked and interestingly, is frequently associated with an anemia also quite marked. In these cases a diagnosis of primary splenic anemia or Banti's disease is made, and if a surgical cure is attempted, a further propagation of the thrombus into the mesenteric veins results in infarction of the intestine and death. We will not discuss here the varying etiology of splenic anemias, of which primary thrombosis of the splenic vein is one; but it would not seem amiss to suggest that, in cases where splenectomy is contemplated in treatment of Banti's disease, the history should be carefully examined for "critical episodes" suggestive of chronic portal thrombosis. Should such be the case, splenectomy must be considered as a hazardous venture.

TREATMENT

Unfortunately there is no treatment of any essential value in this condition. In acute cases the usual procedures for the treatment of shock, ileus, etc., are of course instituted. In my own case (No. 1), I felt that perhaps the repeated injections of intraspinal novocain given in the hope of relieving the marked ileus present was of considerable value, and perhaps definitely influenced the outcome toward the side of recovery. The basis for this opinion is that in relieving the critical distension of involved gut, the already embarrassed circulation to that loop is relieved. The huge ascites can be controlled by paracentesis. In the chronic cases, instructions should be given as to the avoidance of all alcoholic beverages, or any drug toxic in any way to the liver.

SUMMARY

Thrombosis of the portal venous system has been discussed from the standpoint of etiology, symptomatology, frequency, pathological physiology, and treatment. It is suggested that the condition is too infrequently recognized as a clinical entity. It is pointed out that the acute condition may closely simulate an abdominal emergency, and that in the chronic form the associated splenomegaly should not be regarded as successfully amenable to surgical treatment. One personal case and eight case histories of portal thrombosis from the Los Angeles County General Hospital are reported.

REPORT OF CASES

CASE 1.—H. A., female, white, divorced, 30 years, seen at 6 p. m., January 25, 1934. Admitted 9 p. m., St. Vincent's Hospital.

Personal History.—Has always been well. No operations. Drinks considerably—particularly during Christmas holidays—three weeks ago.

Came home from work as stenographer at 6 p. m. Felt tired and nauseated. Began to have colicy pain in epigastrium and vomited. When seen at 6:30 p. m., was lying doubled up with epigastric pain. Pulse rapid and weak. Perspiring and somewhat pale. Tenderness and spasm in right upper quadrant. Lower abdomen soft and flat. Sent to hospital, where seen again at 9 p. m. Patient then in complete shock. Pulse and blood pressure imperceptible. Air hunger. Abdomen now found to contain much fluid. Pelvic examination negative. White blood count 17,000.

Patient treated for shock. Thought to have positive ruptured ectopic pregnancy. Transfused and operated next morning, when condition slightly improved.

At operation, abdomen found filled with clear yellow fluid, two liters. Pelvis and all other organs found negative, except for thickened thrombosed portal vein. Liver showed considerable evidence of a chronic hepatitis. Abdomen closed.

Patient relieved immediately following operation and transfusion. On third day abdomen again distended with fluid and in addition marked ileus developed. Vomited several times and vomitus contained clots of blood. Ileus apparently of the paralytic type and treated with Levine tube. Connell suction and Harris drip. Ascitic fluid leaked continuously from wound. Ileus very marked and patient very uncoöperative. Used 100 milligrams novocain crystals as spinal anesthesia in treatment of ileus. Patient somewhat relieved. Patient transfused again on the eleventh day. On thirteenth day abdomen reopened, at suggestion of consultant. One hundred and fifty milligrams novocain crystals used as spinal anesthetic. More clear yellow fluid obtained. Evidence of rather marked ileus, but no gangrene or peritonitis. Following this operative procedure, patient again vomited blood-tinged material. Ileus persisted for some time, gradually subsiding in approximately three weeks. Ascitic fluid remained in abdomen, also gradually subsiding. Discharged in fair condition on March 10, 1934. Patient continued to have abdominal distension and recurrences of intermittent ascitis, both of which gradually subsided over a period of three to four months. General condition good.

Returned to hospital January 18, 1935, for repair of incisional hernia and exploratory. White blood count was still 15,000, polymorphonuclears 64 per cent. At operation, under spinal anesthesia, a spontaneous omentopexy was found and numerous greatly dilated veins were present in the gastrohepatic omentum. The portal vein was palpated as a firm cord very much resembling a rosary.

Other thrombi were seen in the omentum and one removed for examination. This revealed a bland organizing thrombus. The liver was as at previous operation. The spleen was considerably enlarged to palpation. The hernial defect was repaired and patient made an uneventful recovery. Two months later the spleen was found palpable almost to the umbilicus. Recurrent attacks of upper abdominal pain with intermittent ascites have occurred. Otherwise patient pretty well. No anemia associated with splenomegaly.

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Case 2.—Patient No. 311-782, age 31, male, Malay, cook. Admitted October 1, 1933. Died November 16, 1933. Vomited blood (one day). Bloody stools (one day). Pain in epigastrium (two weeks). Diagnosed bleeding peptic ulcer, but x-rays not confirmatory. Ascites present on October 14. Diagnosed Banti's disease and splenectomy performed November 10. On November 15, white blood count 23,800. Died with distended abdomen. Autopsy: Stomach filled with bloody fluid. The portal, splenic and superior mesenteric veins filled with recent bland thrombus. Gangrene of intestine. Incidental: Primary carcinomia (hepatoma) of liver.

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Case 3.—Patient No. 186-733, white, male, age 45. Admitted November 7, 1931. Died November 24, 1931. Complaint: Pain in right upper abdomen, shortness of breath, enlargement of liver. Treated for cardiac decompensation. On November 22, sudden onset of severe abdomenal cramps, unrelieved by morphin. Died two days later with distended abdomen. Autopsy showed bland thrombosis of superior mesenteric vein, with gangrene of upper small intestine. Abdomen filled with bloody fluid. Evidence for hypertensive heart disease.

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Case 4.—Patient No. 172-160, white, male, age 74. Cement worker. Entered hospital February 11, 1932. Died February 19, 1932. Complaints: Pain in abdomen, mental confusion. Admitting room diagnosis: Abdominal pathology. Vomited dark fluid. Became comatose. Abdomen distended and tense. Autopsy showed acute bland thrombosis of all mesenteric veins to small intestine with gangrene of intestine. Abdomen filled with bloody fluid. Evidence of arteriosclerotic heart disease.

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Case 5.—Patient No. 201-819, white, female, age 37. Admitted July 19, 1933. Died July 25, 1933. Patient operated July 21, and cholecystectomy for "strawberry" gall-bladder performed. Death three days later with hyperpyrexia. Autopsy showed operative ligation of right portal vein and right hepatic artery with infarction of right lobe of liver.

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Case 6.—Patient No. 194-698, white, male, age 5 months. Admitted March 14, 1932. Died March 14, 1932. Clinical diagnosis on admission: Bronchopneumonia. Autopsy showed bilateral staphylococcic bronchopneumonia, plus thrombosis of superior mesenteric vein.

Case 7.—Patient No. 179-882, white, male, missionary, age 52. Admitted September 24, 1931. Died September 25, 1931. Distended, painful abdomen containing ascitic fluid on admission. Electrocardiogram indicated coronary disease. Vomited bloody material. Autopsy showed marked portal cirrhosis with thrombosis of mesenteric veins and gangrene of intestines.

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Case 8.—Patient No. 98-697, white, male, age 60. Admitted October 20, 1931. Died October 23, 1931. Complaint: Pain in abdomen and vomiting; loss of weight. Found to have carcinoma of stomach and died following a partial resection. Thought to have died of hemorrhage. Autopsy showed carcinoma of stomach with metastasis to liver, and acute bland thrombosis of superior mesenteric veins.

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Case 9.—Patient No. 113-643, white, male, age 59. Admitted December 26, 1930. Died January 1, 1931. History of previous attacks of upper abdominal pain associated with hematemesis. Clinical diagnosis: Cirrhosis with bleeding esophageal varices. Continued to vomit blood. Transfused several times. Died of hemorrhage. Autopsy showed Caput Medusa, portal cirrhosis, thrombosis of superior mesenteric, splenic and short gastric veins. Gastric varices.

1930 Wilshire Boulevard.

REFERENCES

1. Langdon-Brown, W.: Brit. M. J., 2:1393, 1905.
2. Langdon-Brown, W.: St. Barth Hosp. Rep., 37:53, 1902.
3. Webster, L. T.: Bull. Johns Hopkins Hosp., 32:16, 1921.
4. Davies, J. C.: The Lancet, 215:498-500, 1928.
5. Baehr & Klemperer, M.: Clin. North America, p. 391 (Sept.), 1930.
6. Weir, J. F.: Proc. Staff Meetings, Mayo Clinic, pp. 321-323 (May 30), 1934.
7. Warren & Eberhard: Surg. Gynec. and Obst., 61:102, 1935.

DISCUSSION

Charles A. Noble, Jr., M. D. (384 Post Street, San Francisco).—To listen to this interesting presentation of portal thrombosis has been a privilege for which I am deeply grateful. Doctor Pallette has covered his rare subject in a masterly way. For me, a mere internist, to comment on its surgical phases would perhaps be audacious, but it might be of interest to review the connection between portal thrombosis and splenic anemia, or Banti's syndrome.

In the first place, let me attest the rarity of the diagnosis, portal thrombosis, in our hospitals. Out of 25,000 admissions at the University of California Hospital, portal thrombosis of the bland form was diagnosed four times—three times only at autopsy; and in each case it was but a terminal episode in a neoplastic disease. During a fifteen-year period at the San Francisco Hospital, covering 145,000 admissions, bland thrombosis was diagnosed nine times, and proved in but seven. Of these seven patients, two died of neoplastic disease, two of tuberculosis, one of congestive heart failure, and one of a subacute bacterial endocarditis. In only one case was the diagnosis made antemortem as a primary episode leading to splenectomy and cured, at least temporarily.

These figures would imply that this is a rare condition. Rolleston, however, states that 3 per cent of patients with such a common disease as cirrhosis of the liver have portal thrombosis. The discrepancy probably lies in the fact that a diagnosis not kept in mind is going to be missed not only clinically, but at autopsy.

Just what is Banti's syndrome? In 1866 Greissinger described a group of symptoms including splenomegaly and anemia, to which he gave the name "splenic anemia." In 1884 Banti added a group of patients that he felt were entirely distinct from those with splenic anemia. The characteristic course which he described was divided into three stages, the first consisting merely of painless splenomegaly, anemia and leukopenia, with a normal liver, lasting anywhere from three to twelve years; the second of beginning hepatomegaly, with urobilinuria, lasting twelve to eighteen months; the third, and a quickly terminal phase, indistinguishable from cirrhosis of the liver, of ascites with evidence of portal block. Moreover, the important feature to Banti was that there should be no evidence of syphilis, malaria or, for that matter, any other known reason for this strange syndrome. The splenic pathology was a characteristic fibrosis of reticulum and Malpighian follicles—degeneration, and frequently thrombosis of the splenic vein.

These delineating characteristics were soon forgotten, and splenic anemia and Banti's disease became to some, such as Osler, merely one and the same disease; those cases progressing to the third or last stage, with hepatic damage, being allowed the eponymic title of Banti's disease. It was Osler, too, not Banti, who pointed out the frequency of early and oft-repeated gastro-intestinal hemorrhage, occurring long before there is any evidence of liver damage.

Splenic anemia as a disease was a real medical Poland, from which bits of territory have continually been removed. These removals include cases where factors such as pernicious anemia, hemolytic anemia, Von Jaksch's anemia, lymhoblastoma, and the leukemias, the Gaucher group, syphilis, kala-azar, and malaria, have been identified as playing an etiologic rôle. What is left?

Undoubtedly there is a group of cases of unknown etiology with some or all of the symptoms and signs described above by Banti. Perhaps many would not progress to have cirrhosis of the liver. In some of them, but not all, portal or particularly splenic vein thrombosis is found on careful search at autopsy, but is this thrombosis secondary to the splenic changes, or does the splenomegaly succeed the venous clot? It is probable that both sequences take place. There are cases on record of splenic vein thrombosis with pain, splenomegaly, fever, and leukocytosis, which later develop gastric hemorrhages, anemia, and leukopenia. Some pathologists claim that the splenic pathologic picture is different from that described by Banti. Others, however, claim that the pictures are identical, and that even in certain patients with primary cirrhosis of the liver, the spleen may simulate the Banti spleen. Until more is known about the cause of the splenomegaly, and of these pathologic changes, confusion will continue to reign.

However, in splenic anemia it is important to try to distinguish those cases where splenic vein thrombosis has taken place, because those are perhaps the ones where splenectomy is contraindicated. Perhaps the history of pain, fever, rapid splenomegaly, or development of collateral circulation without evidence of liver damage are the most helpful symptom signs in suggesting past thrombosis. Rarely do any of these symptoms occur early in the group described by Banti. Should glycosuria occur, it would suggest interference also with pancreatic circulation. The rapid development of ascites is not a valid differential point, as this phenomenon sometimes occurs in cirrhosis of the liver.

Splenectomy, as you know, has long been advocated for patients with splenic anemia. More recently splenic artery ligation has been successfully reported. Cures are often dramatic, but portal thrombosis is a frequent complication, and possibly patients with a previous thrombosis are the ones in which this is most apt to occur. Evans, in England, has confirmed the experience of Rosenthal that patients in whom the preoperative platelet count was below normal did better postoperatively than the group whose platelets were normal or slightly increased in number. In both groups the platelet counts rose to high levels postoperatively, but in those with normal counts preoperatively the platelets stayed up, and in this group thrombosis may occur more often. Perhaps experience will show this test to be of value.

In conclusion, let me reiterate that splenic anemia is merely a broader group, from which Banti has separated cases whose etiology could not be determined. Splenic vein thrombosis can in time produce a similar, if not identical, syndrome. Only more attention clinically and pathologically to the portal venous tree will help elucidate this problem. May I plead for such attention?

Arthur S. Granger, M.D. (2007 Wilshire Boulevard, Los Angeles).—The acute type of bland portal thrombosis, such as occurred in the case reported by Doctor Pallette is, fortunately, but rarely seen. The difficulties in diagnosis of such a condition are apparent, but the sudden onset of ascites is certainly suggestive of pathology of this type. In the more slowly developing cases, where the occlusion of the portal vein is gradual, sufficient time usually elapses for the development of collateral circulation, and here the picture is that of a chronic splenic anemia, with splenomegaly, anemia, occasionally leukopenia and a tendency for hemorrhages from the stomach and intestines. Extreme caution should be exercised in the treatment of these chronic forms, especially if splenectomy is contemplated, and such a procedure should not, of course, be undertaken if there be any sign of thrombosis in the portal system.

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George H. Houck, M. D. (2007 Wilshire Boulevard, Los Angeles).—Improvement in diagnosis not infrequently depends upon greater knowledge of the local lesions which may obstruct blood vessels. In the arteriosclerotic syndrome one expects thromboses of cerebral or coronary arteries, and in certain chronic abdominal diseases one may look forward to obstructive lesions within the veins of the portal system. Thus, "bland" portal thrombosis may occur in relation with cirrhosis, neoplastic disease, hepatic syphilis, and other disorders. Doctor Pallette emphasizes these sequences, and calls to our attention the symptoms which may be expected. This symptom picture has been, and continues to be, one which confuses the physician. Acute ascites, however, should bring to mind the possibility of portal thrombosis, and it will be useful to include the same condition in the differential diagnosis of the splenic anemias.

OBSTETRICAL ANESTHESIA*

By La Verne Wright, M.D.
San Francisco

Discussion *by Edward N. Ewer, M. D., Oakland; Caroline B. Palmer, M. D., San Francisco; H. A. Stephenson, M. D., San Francisco.*

WITH the ever-increasing demand of the modern woman for painless childbirth, obstetricians and anesthetists have been increasingly diligent in the search for an ideal analgesic that will meet the demand.

At present we have none: each case has different needs and different reactions, requiring oftentimes the closest coöperation between the patient, obstetrician, and anesthetist, all working for the greatest possible relief.

ETHER AND CHLOROFORM

Since the discovery of ether by Long in 1842 and chloroform by Simpson in 1847, many drugs and combinations of drugs have been tried and discarded. At the present time chloroform is but little used, unless it be in rural districts, for though efficient in relieving the mother's pain, it was found to have injurious effects on the child; and while ether is safer for both mother and child, the present trend is also away from it. Both were used extensively for many years.

SCOPOLAMIN AND MORPHIN

We then come to the days of twilight sleep, introduced in 1902 by Steinbrickel of Germany and reaching the height of its popularity about

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* Read before the Anesthesiology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

1915. The reaction of many patients to the routine administration of scopolamin and morphin caused worry, because of the greatly depressed respiration and blood pressure; and given in smaller doses it often left the patient unmanageable, without the desired results. In either instance many babies were narcotized and some could not be resuscitated. Hence, it has been practically discarded.

MORPHIN AND ETHER

In 1923, Gwathmey of New York introduced a method of analgesia employing both morphin and ether. It then was and still is considered very valuable by many leading obstetricians, especially in primiparae with long, slow labors. It consists of a preliminary dose of 1/6 to 1/4 grain of morphin, administered in the first stage, usually when the cervix is about half-dilated. Gwathmey found the morphin more effective when combined with two cubic centimeters of chemically pure magnesium sulphate, followed in about one-half to one hour by a colonic instillation, consisting of quinin 10 grains, alcohol 2 drams, ether 2½ ounces in 4 ounces of olive oil, to be very slightly warmed and instilled slowly after first cleansing the rectum with an enema. Care should be taken to get this mixture high up in the bowel above the presenting part. The patient usually enters into a fairly deep sleep, arousing only with pains. The effect of this usually lasts about three hours, at the end of which most patients can have gas and oxygen started. This method is considered safe for both mother and child, unless contraindicated by a history of diabetes, colitis, respiratory disease, or chronic kidney disease in the mother. Other toxemias, cardiac cases or malpositions do not constitute contraindications, and it can be safely used in the home. If labor is prolonged and analgesia is not of sufficient duration, it may be repeated after four hours, omitting or reducing to a minimum the morphin injection if delivery is probable in the following four hours. In a small percentage of cases there is lack of coöperation, but of no serious character, and in all cases the perineal muscles are well relaxed. After delivery, it is well to empty the bowel by passing a rectal tube and then injecting three to four ounces of oil, to be retained.

AVERTIN

Tribromethanol or avertin was developed in Germany in 1927, and used quite extensively in obstetrics in Europe, but as it is contraindicated in diseases of the kidneys, liver and colon, and in hypothyroid cases, its use in this country in obstetrics is mostly confined to selected cases, and then in doses that require the addition of nitrous oxid and oxygen in the third stage and for repair. It is given rectally between pains after the head is below the brim and the cervix is well dilated. The advised dose is limited to 60 milligrams per kilo body weight, preceded one-half to one hour by one-sixth grain of morphin hypodermically. It is said to have been used with good results in eclampsia in larger doses, 80 to 100 milligrams per kilo. The convulsions finally cease after becoming less severe and less frequent.

In the last three or four years the barbiturates have become increasingly popular, either as the principal hypnotic or as adjuvants to morphin and scopolamin. They are slowly eliminated, and their action as hypnotics is not only prompt but prolonged. In therapeutic doses they do not materially affect the respiration of the mother or the circulation of either mother or child, though some narcotized babies have been reported by DeLee when sodium amytal was used. Pentobarbital sodium is at present the most popular and most frequently used, the dose ranging from four to as much as seven and a half grains. In a large percentage of mothers there is a restlessness and lack of coöperation which require extra nursing supervision. In primiparae and slowly progressing multiparae, the time they are given depends more on the frequency and character of the pains than on the dilatation of the cervix. The restlessness seems less if the large initial dose of six to seven and a half grains followed by 1/150th to 1/200th of a grain of scopolamin *or* one-eighth to one-fourth grain of morphin. This may be repeated in smaller doses if labor is prolonged. It is contraindicated in known hepatic disease.

PARALDEHYD

Within the past year paraldehyd has again returned to the field of surgery, as well as obstetrics, as a hypnotic and sedative. It is commonly called the safest hypnotic, as no unfavorable effects on the circulation, respiration, blood pressure or metabolism have been recorded, and, barring the disagreeable odor, there is much in its favor. A few cases of hiccoughs, possibly one in twenty cases, have been noted, but of only short duration. Because of the very disagreeable odor and taste, it is best given by rectal injection in dosage of one cubic centimeter of paraldehyd to each eight and one-half pounds of body weight, with one and one-half cubic centimeters of benzyl alcohol. This is given rectally through a large catheter, after the bowel has been thoroughly cleansed with a soapsuds enema and the paraldehyd followed immediately by the instillation of one ounce of normal salt solution. As it is eliminated from the body largely through the lungs (very slightly through the kidneys and skin), the odor appears very quickly on the breath of the patient, though she is unconscious of it. In obstetrics the rectal injection is given when the patient begins to complain of her pains, followed in one-half to one hour by one-sixth grain of morphin hypodermically and after another hour, a second rectal injection of paraldehyd may be given if necessary. The patient is more coöperative than with pentobarbital and morphin, or scopolamin, and while the effect on the pain is less than with avertin, the margin of safety, which is the first consideration, is much greater and the expense to the patient much less. Paraldehyd may be observed on the infant's breath, but very few cases of infantile asphyxia have been observed or reported.

CYCLOPROPANE

Cyclopropane (C_3H_6), a hydrocarbon gas, developed in 1929 and 1930, is a powerful anesthetic and said not to impair the vasomotor centers nor reduce the blood pressure. Used with a large percentage of oxygen, at least 85 per cent, one or two inhalations will give complete relief from a labor pain. Wesley Bourne, recently reported its satisfactory use in thirty-four cases, while Griffith of Montreal has reported one hundred and forty cases. Personally, I have had no experience with it. Reports indicate that the margin of safety of nitrous oxid and oxygen as a supplementary anesthetic in the third stage is much greater than with cyclopropane. The same may be said of vinil ether and vinethene and evipal.

Spinal and sacral anesthesia have been used in selected cases in the second and third stages and, while no deleterious effects on the child have been reported, the contraindications and dangers are the same as in surgery.

DILAUDID HYDROCHLORID

In 1934, dilaudid hydrochlorid, the hydrochlorid of dihydromorphinone, was first used in very small doses, 1/32nd of a grain, in place of morphin for analgesia after labor is well established. It may be given with or without scopolamin, paraldehyd, barbiturates, or rectal ether-oil. Reports indicate that it acts quickly, uterine contractions are not decreased, nausea is less, and infantile narcosis is less than with morphin.

IN CONCLUSION

While the ideal anesthetic and analgesic have not been found, much good has resulted from the employment of the methods and drugs above outlined. If limited to one method alone, nitrous oxid and oxygen would give the best results to the largest number. The other methods can be used in conjunction with the gas and oxygen, but let us not forget that the use of such an anesthetic is not without its dangers. Obstetrical patients are usually not well prepared for anesthesia, as many women go into labor soon after eating and aspiration must be guarded against. Even with such warnings, the occasional death results. Such emergencies presented by obstetrics for both obstetrician and anesthetist can be matched by no other specialty or branch of medicine, and call for experience, coöperation and teamwork to obtain the best results.

When there is a laceration or an episiotomy to be repaired and no premedication has been given, many obstetricians routinely order an opiate as one-sixth to one-fourth of morphin, or one-third of pantopon, to be given as soon as the cord is tied, thus treating it from then on as a purely surgical case, and in many cases this makes the addition of ether unnecessary or at least reduces it to the minimum.

In spite of the cry being raised in the daily press and lay magazines by a few individuals, I believe women will continue to demand relief from the pains of childbirth. I do not believe damage to personality results from absence of suffering in childbirth, but quite the opposite. The use of safe analgesics takes away the fear of childbearing that all physicians are so familiar with; and since the lack of that fear will add to any prospective mother's personality and charm, let us continue the search!

3856 California Street.

DISCUSSION

Edward N. Ewer, M. D. (251 Moss Avenue, Oakland). Doctor Wright's evaluation of the available analgesic and anesthetic methods agrees closely, I think, with that of the conscientious obstetrician who is determined to give his patients the greatest degree of comfort compatible with safety.

Our first anesthetic was chloroform. It was pleasant and quick in its relief of pain, but had to be abandoned because of rare cases of dangerous liver damage and frequent cases of fetal anoxemia and postpartum hemorrhage.

Ether followed, and was safe enough but slow in action, and required a certain aptness in administration different from that required in the production of surgical anesthesia. With it the pain has to be anticipated a little. Too much ether stops the labor.

Gas without oxygen is quick, but, like chloroform, causes anoxemia in both mother and baby. With oxygen it is safe, but, like ether, more skill and attention are necessary to get the results desired.

When the hospital anesthetist arrives as the head is passing over the perineum, the inhalation agents are skillfully used and the relief is all that can be desired.

But our difficulties arise during a long first and part of the expulsive stage. Here is the field for the analgesics. Each of them in safe dosage is effective for three hours. As they must often be repeated two or three times, we must choose the ones attended with the fewest difficulties, discomforts, and dangers at these repetitions.

The two which seem best to fulfill these considerations at the present time are pentobarbital and peraldehyd, with an occasional sixth or eighth grain hypodermic of morphin if the patient becomes mentally disturbed and unmanageable.

We regret the loss of coöperation on the part of the patient. However, she is relieved of pain, cervix dilatation is not interfered with, and, after all, we can master inefficient expulsive efforts with a relatively harmless minor operation for delivery, after cervix dilatation and descent are accomplished.

The Gwathmey analgesia has served us fairly well and has been improved by the addition of paraldehyd.

It seems to me that paraldehyd alone, or following an initial small dose of pentobarbital, is likely to supplant the Gwathmey. It can be given with benzyl alcohol as often as necessary without trouble or danger.

All the other agents have disadvantages, as pointed out by Doctor Wright.

A procedure which we have found satisfactory at the Alameda County Hospital is as follows:

Three grains of pentobarbital are given early in labor. In two to four hours 15 cubic centimeters of paraldehyd with 1½ cubic centimeter of benzyl alcohol are instilled rectally, without oil. This is repeated when necessary. Gas and oxygen are given for the last of the second stage and for repair work.

With more use of the analgesics, many obstetricians note a decrease in major obstetric operations. The patient, more comfortable, will tolerate a longer labor, and relatives are less urgent in their demands for action.

This paper of Doctor Wright is not marred by overenthusiasm, and no questionable procedures are advised. It is safe, sane and yet encouraging, unlike some recent discussions of the subject.

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Caroline B. Palmer, M.D. (2300 Webster Street, San Francisco).—This paper appeals to me as of special value, because it is confined strictly to the subject of anesthesia. Many papers are given at anesthetic meetings which report research work, or sometimes pseudoresearch, the deductions from which have no practical bearing on anesthesia.

I would like to stress the value and safety of nitrous oxid oxygen in obstetrics, and to emphasize the point which the writer has brought out of the necessity of cooperation between obstetrician and anesthetist in order to obtain the best results.

The writer has implied the necessity of a skilled anesthetist in obstetrical analgesia and anesthesia. This point, also, cannot be stressed too greatly, as at any time in the course of delivery conditions may arise that endanger two lives, and the anesthetist should not be forced to ask the help of the obstetrician. Most experienced anesthetists have known of tragic results due to the rather prevalent idea that almost anyone can give an obstetrical anesthetic.

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H. A. Stephenson, M.D. (490 Post Street, San Francisco).—Doctor Wright has covered the subject well and understandingly. I have had no experience with avertin and cyclopropane. Of the others, I feel that, in selected cases, paraldehyd, followed by morphin, nitrous oxid and oxygen have given best results. The analgesia is usually quite satisfactory, and the amount and duration of anesthetic required in the second stage are reduced considerably. The recovery of such patients seems to me to be somewhat more rapid than in patients not receiving this combination of drugs. No ill effects on mother or baby have been observed after its use.

Doctor Wright mentions briefly the barbiturates. These have received great attention lately, and have been extensively employed. My experience with them leads me to the conclusion that they possess no advantage over the paraldehyd.

I wish to strongly emphasize the point brought out regarding the necessity of good teamwork and coöperation on the part of anesthetist and obstetrician.

TESTS FOR VASOMOTOR CONTROL

By LeRoy K. Gay, M.D.
and
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An abundance of literature has been accumulating on the subject of peripheral circulatory disorders. Numerous measures, complicated for the most part, have been advocated as a means of distinguishing between vasomotor spasm and obliterative arterial disease. To the general reader, the data offered is often confusing, or its scope of application narrowed to a few clinics specializing in the study of such disturbances. There are, however, several simple tests requiring no elaborate apparatus which may be utilized in the office.

The basic principle of the majority of the procedures, to be briefly described below, is to produce, directly or reflexly, a state of vasodilatation of the peripheral vessels. An important prerequisite in every instance is that the environmental temperature, where the test is being conducted, be in the range of 18 Centigrade to 22 Centigrade, in order to obtain a preliminary low-basal level as a measure of comparison after vasodilatation.

Thrombo-angiitis obliterans and Raynaud's syndrome are the two peripheral circulatory diseases of chief concern, due to the relatively high incidence of both afflictions; the difficulties encountered in arriving at a definite diagnosis; and the rapid strides made by the neurosurgeons, in recent years, to alleviate the pain and limitation of activity, particularly in the case of the former. Sympathectomy is usually unsuccessful in Raynaud's phenomenon, because the disturbance is due to a local fault of the vessels, which, while not definitely known, is regarded as a functional one, an overaction to the cold stimulus.

INDIRECT OBSERVATIONS OF THE PERIPHERAL VESSELS

1. *Peripheral Pulse.*—In addition to the radial pulse which is usually palpated, the dorsalis pedis, posterior tibial, popliteal and femoral arteries are easily accessible. Absence of pulsations in one of these principal vessels is significant. It is well to remember that the dorsalis pedis is absent in four per cent of cases, and that in another eight per cent the artery is in a lateral position. The pedal pulses are frequently found to be absent in older male patients, who usually have no complaints. The slow gradual occlusion of the main vessels has permitted the development of an adequate collateral circulation.

2. *Postural Color Changes.*—Pallor on elevation of the part accentuated by rapid dorsal and ventral flexion, and rubor in the dependent position are signs of diminished blood flow. At a certain level, usually below the horizontal position, the pallor changes to the normal skin color without showing the reddish hue of capillary stagnation.

3. *Blood Pressure Determination.*—The ordinary sphygmomanometer can be readily employed to measure the difference in blood pressure on the two sides, both upper and lower extremities. The patient should be in the supine position and relaxed as much as possible.

4. *Cutaneous Histamin Reaction.*—See paper by Dr. Eric Ogden on this subject (Histamin and Adrenalin Tests).

5. *The Plethysmograph.*—Blood-volume changes in the digits or the extremities can be determined by the aid of this instrument. An airtight capsule to which is attached a finely-drawn pipette, containing a small amount of a colored indicator, is fitted snugly to the part to be examined. Photographic records are taken of the oscillations of the liquid indicator. The extent of excursion of the pulse is probably the result of the same factors which maintain blood pressure, in addition to the resistance of the soft tissues of the part in question. The deflection obtained is dependent upon the ability of the vessels to dilate with each heart beat and, in this sense, is a measure of vascular dilatation of the part. This pulse volume deviates sharply, in size and contour, in patients suffering from occlusive diseases of the arteries.

6. *Reactive Hyperemia.*—This phenomenon displays itself in a bright flush of the skin associated with an increased volume of the pulse on releasing the obstruction to the circulation. It was first intensively studied by Bier and has been further investigated by Lewis and Grant. Reactive hyperemia produces active dilatation of superficial terminal arterioles and outermost arteriolar plexuses, as well as deep vessels of an extremity. It is believed to be due to the accumulation of slowly diffusible products of metabolism in the extravascular spaces during the period of circulatory disturbance.

This test, therefore, can be employed to determine the patency of peripheral vessels in an extremity, under control conditions.

A blood pressure cuff is applied to the upper part of the extremity to be studied. The pressure in the cuff is raised abruptly to 300 or 350 millimeters of mercury. Time of occlusion varies from five seconds to fifteen minutes, average five minutes. The reaction is greater in a limb, the temperature of which has been raised to 30 to 35 Centigrade, but has no effect on its duration. Hyperemic flushing lasts from one-half to three-quarters as long as the occlusion is maintained. It reaches its height within twenty to thirty seconds and then fades away more gradually; the fraction is smaller when occlusions are very prolonged.

Visual observation, while simple, is quite inaccurate, since heat tends to produce reddening of the skin. Volumetric measurements using a water plethysmograph are more satisfactory and, in addition, the rate at which blood is entering the arm, under given condition, can be ascertained.

DIRECT OBSERVATIONS OF THE PERIPHERAL VESSELS

1. *Skin Temperature.*—The skin temperature of a given extremity depends upon the temperature and humidity of the examining room and body temperature. If these factors are fairly well controlled, room temperature 22 Centigrade, the patient resting and the oral temperature is normal, then thermal changes of the skin are chiefly dependent upon the blood flow. A flat-bulbed mercury skin thermometer is suitable for such determinations.

The value of skin temperature readings, obtained in this manner, is limited to : (1) a sudden drop in the temperature of one extremity indicates inadequate arterial flow; (2) marked differences between symmetrical areas on two extremities; and (3) a rise in temperature after employing various measures designed to relieve vessel spasm, which indicates a spastic element in the vascular occlusion.

2. *Tobacco-Smoking Test.*—Wright and Moffat found that surface temperature dropped markedly following the inhaling of cigarette smoke. This reduction in temperature is believed to be due to the absorption of minute quantities of nicotine. It is a manifestation of the response of the sympathetic nervous system to mild stimulation.

The subject was seated with his hands at the heart level, controlled room temperature and preliminary surface temperature readings taken. The cigarette was suspended by a reed before the patient who was permitted to smoke according to his usual custom. Temperature readings were recorded during and after the period of smoking. Cigarettes and denicotinized ones in addition to "filter paper" cigarettes were utilized in the experiment.

Each type of cigarette, except the "filter paper" cigarette, produced a drop in surface temperature as much as 10 to 15 Fahrenheit, the average being 5.3 Fahrenheit. The change in temperature may not occur with the smoking of every cigarette, but will be noted at some time during the course of a series of cigarettes smoked.

Lampson measured the rate of peripheral blood flow by accurately determining the rate of increase in the hand volume following occlusion of venous return at the wrist. The apparatus employed was a water plethysmograph. No smoking was permitted for three hours before the experiment.

The subject lay on his back, fully clothed and covered with a thin woolen blanket, with the right hand in the apparatus, under controlled conditions. The water-bath temperature varied between 30 to 33 Centigrade. The first half hour was devoted to determine the normal rate of blood flow; the patient then smoked, and records were taken during and after the period of smoking. The results were as follows: (1) inhaling of tobacco smoke—sudden drop in the rate of peripheral blood flow during the period of smoking, and at the end of forty minutes the flow was still partially depressed. Rise in blood pressure of 10 to 20 millimeters of mercury; pulse rate accelerated from six to twenty beats per minute; (2) noninhaling-vasoconstrictor response which lasted only fifteen minutes. Changes in heart rate and blood pressure were insignificant; (3) denicotinized cigarettes—no vasoconstrictor response. The inhalation of a second cigarette induced slight reduction in the rate of blood flow, which returned to normal in fifteen minutes. Pulse rate and blood pressure remained constant; (4) pipe-smoking showed moderate reduction in blood flow during the act of puffing. No change in heart rate or blood pressure. If smoke were inhaled, sudden vasoconstriction occurred; (5) cigar smoking—30 per cent reduction in blood flow; 75 per cent reduction after moderate inhaling.

Blood-flow rate of reduction was greatest immediately after smoking. The degree and duration of vasoconstriction could be correlated to the amount of nicotin absorbed. Inhaling of tobacco smoke at least halved the rate of peripheral blood flow and caused it to remain partially depressed for about an hour. If smoke is not inhaled, the vasoconstrictor response is almost as great, but the reaction persists for only fifteen minutes.

3. *Overcooling.*—This procedure is utilized in studying Reynaud's syndrome of the upper extremities. Since excessive cold induces an after-reaction in the skin, tending to dilate the arterioles, this test effectively determines the degree and extent of involvement of the vessels, and suggests an appropriate course of therapy, vessel reeducation.

The more affected digit of one hand and the corresponding digit of the other are immersed in cooled water, at or near 0 Centigrade for ten minutes. The digits are withdrawn, gently wiped dry, and skin temperature readings are taken at five-minute intervals. The height of reaction occurs in about twenty minutes and continues for an hour or more. The neighboring digits act as controls during the test. In mild cases of the disease, the reaction of warmth of the immersed fingers will be observed to spread to the immediately adjacent digits, but in the more advanced stages little or no reaction is noted, reddening of the skin indicating only mild vasodilatation.

4. *Cold Stimulation Test.*—Hines and Brown devised this procedure as a possible means of detecting a prehypertensive state in patients who later in life develop essential hypertension. In subjects with essential hypertension vasomotor centers react excessively to stimuli which in normal individuals produce a minimal response. If hyperreactability in this disease is due to a biologic constitutional defect, its existence should be demonstrable in early life. It is of indefinite value if therapeutic measures to control vasomotor irritability are to be instituted before actual signs of disease appear.

The subject is placed in a recumbent position for fifteen minutes or until the blood pressure has approximated the basal level. With the blood pressure cuff placed on one arm, the opposite hand is placed in cooled water (4 to 5 Centigrade) ; the blood pressure is taken at the end of thirty seconds and again at the end of sixty seconds. The hand is removed from the water and readings are taken every two minutes until the blood pressure returns to the initial basal level. The highest reading obtained is recorded as a measure of the response. Usually the blood pressure returns to the basal level in two minutes after removal of the hand from water. This reaction is independent of any significant changes in the pulse rate.

Results: (1) normal group-average response for blood pressure, 8.8 millimeters and 7.93 millimeters of mercury systolic and diastolic, respectively. Range varied from 5 to 15 millmeters and 5 to 12 millimeters of mercury systolic and diastolic, respectively; (2) hypertensive group—young adults included—average values for blood pressure 34.5 millimeters and 23.2 millimeters of mercury systolic and diastolic, respectively. The range varied from 20 to 90 millimeters and 15 to 65 millimeters of mercury systolic and diastolic, respectively. The basis for the reaction is regarded as being purely a neurogenic reflex response to cold.

5. *Immersion of Forearms in Warmed Water.* This method, suggested by Gibbon and Landis, produces reflex dilatation of vessels of the lower extremities.

Both forearms are immersed for twenty minutes in warmed water, maintained at a temperature of 43 to 45 Centigrade by means of an electric heating coil. Skin temperature readings are taken at regular intervals from the time of immersion. Temperature rise in the toes will be observed in about fifteen minutes, normal vasodilatation level (32 Centigrade) being reached in thirty minutes. In defective peripheral circulation a rise in skin temperature reaching or exceeding the normal vasodilatation level definitely excludes obliterative structural disease, demonstrating an adequate vascular bed to overcome the organic obstruction.

6. *Blanket Method of Coller and Maddock.*—The subject is covered with a light rubber sheet to the clavicular line and wrapped in three woolen blankets. With the high environmental temperature attained in this manner, the physical regulation of the body temperature results in maximal dilatation of the peripheral vessels.

Skin temperature readings are taken at the end of one hour. If the level of normal vasodilatation is not reached in this period, it is indicative of organic vascular occlusion.

7. *Induction of Artificial Fever.*—Lederle triple typhoid vaccine, five to twenty-five million killed organisms, injected intravenously. Mouth and skin temperature readings recorded every half hour over a period of three to five hours.

The following factors are thus obtained: (1) vasomotor index, the quotient of the rise in surface temperature divided by the rise in mouth temperature. A vasomotor index of two or more indicates an abnormal degree of vasoconstriction; (2) vasomotor range-rise in surface temperature of the affected digits from basal to maximum levels with fever. A high degree of vasoconstriction is considered to be present if this increase is 4 Centigrade or more; (3) maximum vasodilatation level—the highest temperature obtained in the affected digits. A level of 31.5 Centigrade or more indicates an adequate degree of vasodilatation of the digits in question.

In all of the foregoing factors, the rise in temperature of the mouth is deducted from the rise in surface temperature, so as to eliminate the actual increase in the temperature of the blood.

8. *The Oscillometer.*—Boulitte modification of the Paschon oscillometer. The apparatus consists of two overlapping distensible pouches, having a combined width of 15 centimeters, enclosed in a rigid web cover fitted with straps. The instrument is strapped snugly to the extremity to be studied. By a simple valve arrangement, the pouches can be inflated singly or together. A manometric dial records the oscillometric variations at different pressures. Air is pumped in until the pressure is great enough to prevent any movement of the oscillatory needle. By means of a needle valve, the pressure is reduced 10 millimeters at a time. Eight separate readings are taken of each extremity studied.

Normal values are recorded as follows: Upper extremities—rise begins at 120 millimeters of mercury and drops to zero between 40 to 30 millimeters of mercury. Maximal oscillometric phase occurs between 100 to 80 millimeters of mercury. Lower extremities—rise begins at 160 millimeters of mercury and drops to zero around 40 millimeters of mercury. Maximal oscillometric phase occurs somewhat above 100 millimeters of mercury. In obliterative vascular disease, oscillations occur over a much narrower range of pressure.

It is possible, by means of this apparatus, to determine the level of vascular obstruction, the intensity of myocardial contractions and the elasticity of the vessel walls.

9. *Spinal Anesthesia.*—Morton and Scott found that if the sympathetic fibers innervating the blood vessels of the lower extremities were completely paralyzed, under temperature-controlled conditions, vasomotor spasm could be differentiated from organic obstruction.

Procain Hydrochlorid 0.100 to 0.120 gram is dissolved in a small amount of spinal fluid and rapidly injected intraspinally. Skin temperature measurements are taken at five or ten-minute intervals, as well as the pulse rate and blood pressure.

Three types of reaction are recorded: (1) no change in gradient, pointing to entire absence of vasospasm; (2) complete obliteration of the gradient, indicating that the peripheral disturbance is due entirely to vasomotor spasm; and (3) partial obliteration of the gradient, the peripheral surface temperature definitely elevated, but not reaching the normal vasodilatation level, demonstrating a mixture of vasospasm and obliterative processes.

Exceptions to the above for normal vessel response are found in patients with fever, or in those suffering from advanced carcinoma.

The normal vasodilatation-level has been fixed by the authors at 33 Centigrade. To estimate the element of organic obstruction in vascular disease, the maximum surface temperature reached after sympathetic paralysis is subtracted from this figure, this difference being termed the obstruction index.

Similar information, while not as complete or as accurate, may be secured by peripheral nerve block or paravertebral ganglion anesthesia.

10. *Arteriography.*—One of the measures outlined above usually suffices to differentiate between spasm and obliteration of the peripheral vessels, but there remains a comparatively small group of cases in which visualization of the peripheral arterial tree is extremely important as a diagnostic aid. Arteriography furnishes definite and useful information regarding the extent of the disease, the nature of the pathologic process and the physiologic compensation for the diminished flow of arterial blood as a result of occlusion of the main arterial passages.

Thorotrast, an opaque slightly radioactive substance, is utilized for this purpose. It is composed, by weight, of 19 to 20 per cent thorium oxid, and 16 to 19 per cent of a protective colloid. When introduced into the arterial circulation, it is engulfed by the reticulo-endothelial cells and very slowly excreted. The effects of its prolonged deposition within the body are, as yet, largely unknown.

The drug is injected in amounts varying from five to twenty cubic centimeters, depending upon the size of the subject and the area to be visualized, directly into the brachial or femoral arteries. Pressure is made and maintained above the site of injection, while a series of rapid x-ray exposures are made.

384 Post Street.

HYPERTENSION: ITS SURGICAL APPROACH

By Francis M. Findlay, M.D.
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Discussion *by Alfred E. Koehler, M.D., Santa Barbara; Franklin R. Nuzum, M.D., Santa Barbara; E. F. Holman, M.D., San Francisco.*

Introduction: Operative results in over two hundred cases of hypertension were reported by various surgeons* at the recent meeting of the American College of Surgeons in San Francisco. In a small percentage of these hypertensive cases, the blood pressure has been maintained at a normal level for periods of from several months to two years after operation. These investigators also observed a definite amelioration of symptoms and an appreciable drop in blood pressure in over one-half of the operated cases. Such encouraging results, in a condition that has previously failed to respond to any medical measures, cannot be ignored. Every member of the medical profession should know of the recent progress in this field.

OUTLINE

It is the purpose of this paper, first, to restate the known physiologic and pathologic changes that accompany essential hypertension. Second, to review the fundamental structure and function of the sympathetic and adrenal systems, and to point out their probable influence upon blood pressure. Third, to describe briefly the operative procedures now in use, and attempt to evaluate them. Finally, to propose a more extensive operation, based upon our present anatomic and physiologic knowledge plus the experience gained from previous operations done upon the sympathetic and adrenal systems.

DEFINITION

Both pioneers and present workers in this field have been handicapped because the etiology of essential hypertension is unknown. In describing the condition, Sir William Osler stated: "The exact cause of this high tension is unknown. Some have attributed it to overactivity of the adrenals, but it is much more likely that the primary difficulty is somewhere in the capillary bed—in that short space where the real business of life is transacted." Osler described this condition as simple high tension without signs of arterial or renal disease, and favored Clifford Allbutt's term "hyperpiesa." The condition is well known to be a progressive disease, often occurring in young people. It is characterized in the majority of cases in its early stages by periods of excessive rise in blood pressure without other evidences of pathologic change or disease, and is commonly termed "primary" or "essential" hypertension.

The pathologic changes in the kidney, heart, and blood vessels that result from hypertension have been described. The symptoms due to hypertension are well known. Internists can forecast the probable outcome in a series of cases with a fair degree of accuracy; yet this ability to describe the phenomena related to hypertension affords no

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* References will be given in the reprints.

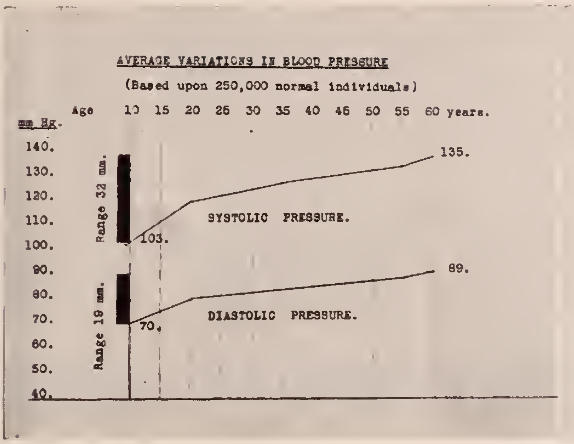

Fig. 1.

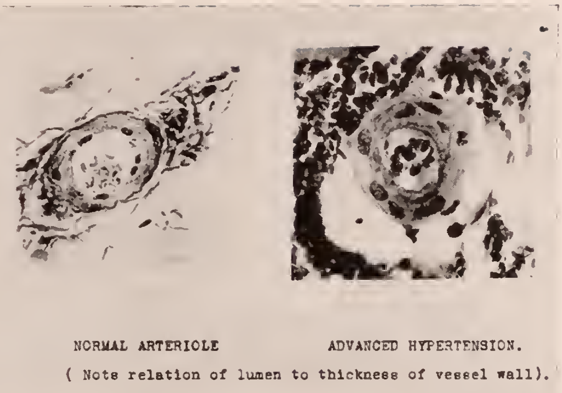

Fig. 2.

Fig. 1.—There is only a rise of 32 millimeters in systolic blood pressure in fifty years. (Chart courtesy of Dr. Harold Frost, Medical Director, New England Life Insurance Company.)

Fig. 2.—Very little permanent improvement can be expected in individuals with thickened vessel walls.

clue to the underlying cause. Many theories have been advanced as to its cause. Although hardening of the arteries often accompanies hypertension, it is improbable that arteriosclerosis ever causes hypertension. Kidney disease alone is responsible for only a small percentage of the total number of cases seen. No doubt there are some hereditary factors, for it is known that hypertension tends to run in families, and that men develop it more often than women. It is often associated with thyrotoxicosis and the menopause. Nervous tension and emotional distress contribute to its advance, and the disease usually progresses in spite of the most conservative or radical medical regimen.

STAGES OF HYPERTENSION

Livingston arbitrarily divides typical essential hypertension into five periods or phases. In the first phase, there is no permanent elevation of the blood pressure, and no kidney, heart or vascular lesions can be detected. However, the patient shows an increasing tendency to respond to minor physical and emotional stimuli by an excessive rise in blood pressure. Frequent observation reveals marked alterations in blood pressure during the twenty-four hours.

In the second phase, the pressure fluctuations become more acute and prolonged, and the blood pressure does not return to normal levels, but remains permanently elevated. While organic lesions have no doubt already appeared in the arterioles, they are not clinically demonstrable.

In the third phase, fibrosis of the arterioles with narrowing of the lumen can be seen under the microscope, and there may appear signs of kidney damage and perhaps an albuminuric retinitis.

In the fourth phase, the patient begins to experience symptoms ascribable to hypertension. There may be tinnitis, headache, dizziness or transient cerebral symptoms, failure of vision, kidney symptoms, or complaints indicating that the heart is no longer able to carry on efficiently under the excessive load.

Finally, if the patient is not carried off by some intercurrent infection or accident, he dies as a direct or indirect result of the arteriolar lesions, usually from a cerebral accident, uremia, or cardiac failure. The term "malignant hypertension" has been reserved for the cases that rapidly progress to fatal termination within a few months after the onset of the initial symptoms.

In our experience, the symptoms of headache, pulsation of the vessels of the neck, nervousness, and a sense of constriction in the chest occur much earlier in the course of the disease than Livingston indicates. We would also emphasize the extreme rapidity with which some of the younger cases progress, often ending fatally within a few weeks from the initial onset of the first symptom.

However, we must finally conclude that the fundamental cause of essential hypertension is still unknown. Any attempt to deal with this condition must be undertaken with this fact in mind. The various surgical attempts now being made may not only relieve the symptoms of hypertension, but may contribute some fundamental facts toward the real cause of essential hypertension.

CLASSIFICATION OF CASES

Because the etiology of primary or essential hypertension is not clearly known, much confusion exists in classifying and selecting cases. In the operated cases reported to date, there has been no apparent effort to separate the true cases of early essential hypertension from those with extensive renal damage or gross organic changes in the vessel walls. Several of these cases had marked changes in the fundus oculi; in a few retinal hemorrhages were recorded prior to operation, some had partial paralysis of an extremity from previous stroke; while in others there were urinary findings indicating extensive kidney damage from glomerular nephritis. All operators, however, agree that patients in the younger age groups with hypertensive symptoms of persistent nature, with minimal evidence of organic arterial change and without permanent renal damage, are the best candidates for operation and offer favorable prospects for a cure.

In general it seems that gross arteriosclerotic changes in any individual, marked impairment of renal function or other secondary complications

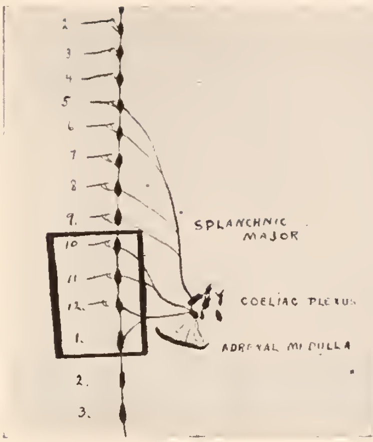

Fig. 3.

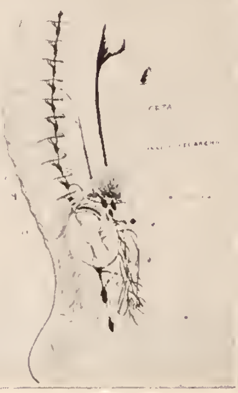

Fig. 4.

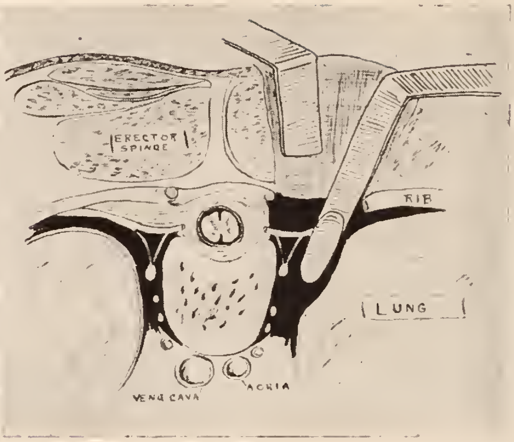

Fig. 5.

Fig. 3.—Operations done now, which only section splanchnic major and remove the lower thoracic ganglia, do not permanently denervate the splanchnic area.

Fig. 4.—Lateral view of sympathetic chain and relation to celiac ganglion and adrenal medulla.

Fig. 5.—Posterior approach to dorsal ganglionectomy and splanchnic resection.

would be a contraindication at the present time for this type of operation. On the other hand, some surgeons have felt that until further knowledge is at hand, there are no real contraindications, and the operation should be done on all individuals with a systolic blood pressure over two hundred, disregarding other evidences of advanced pathology.

DETAILED DESCRIPTION ESSENTIAL

It is essential in the future that any report of cases include a careful description of the type of cases selected for operation. Observations should be recorded as to the vascular condition, the flexibility and range of the blood pressure, the elasticity of the blood vessels, kidney and urinary changes present in each individual prior to operation, as well as the fact that the systolic blood pressure is usually over two hundred. Cases should be followed at frequent intervals for at least a year before results are reported. It is impossible to compare results obtained by different surgeons during the past two years, because the standards for selection of cases have varied. Most of the preliminary reports submitted have not included a detailed study of each individual case. No doubt future reports will give us added details and a clearer picture of each operated hypertensive case.

NORMAL VARIATIONS IN BLOOD PRESSURE

In any consideration of hypertension it is essential to remember that many individuals at intervals in their youth and young adult life may show periods when their blood pressure readings are distinctly above normal, yet in later life will have normal pressure. Single readings have very little value in determining the true status of an individual who is suspected of having essential hypertension. Only by repeated observations over a long period of time can the true picture be seen. Many young individuals from nervousness or some other cause show abnormally high readings of the blood pressure at the first examination, yet repeated subsequent examinations show normal values. With these facts in mind, no patient should be subjected to a procedure which is still definitely experimental until careful observation has shown that individual to be a true case of essential hypertension and that other measures fail to give reasonable prospects of recovery.

SYMPATHETIC ADRENAL INFLUENCE

Because no definite etiologic factors have been found, some writers have assumed that a constitutional abnormality of the sympathetico-adrenal system plays an important part in the production of essential hypertension. Before discussing the surgical approach in this condition, a brief review of the known facts concerning the structure and function of the autonomic nervous system, and the adrenal glands and their possible influence upon hypertension is indicated. The normal anatomy and physiology of the sympathetic nervous system is not well known by the average surgeon today.

AUTONOMIC INFLUENCE

Our knowledge of the autonomic nervous system and its influence upon the circulation, although gradually accumulated, is still incomplete. Galen, John Hunter, Brown-Séquard, Claude Bernard, François-Franck, Cannon, and Leriche have each contributed to our fund of knowledge. Bernard showed that the remarkable ability of the body to maintain a constant temperature, in spite of its changing external environment, was made possible by the autonomic nervous system through its influence upon the vasoconstrictors and vasodilators of the blood vessels. Cannon showed that it was the sympathetic division which controlled vasoconstriction of the blood vessels, and that surgical shock, with its pronounced fall in blood pressure, was in large degree due to dilatation of the visceral blood vessels.

SYMPATHETIC CONTROL THROUGH BLOOD VESSELS

Accumulated observations of many workers show that apparently the entire sympathetic control of our extremities, and of many of our organs, is exercised through the action of the vasoconstrictors of the blood vessels to these parts.

The increase in temperature of an extremity, either following spinal anesthesia or blocking of the peripheral nerves with novocain or alcohol, is entirely dependent upon the increased blood supply which follows temporary or permanent interruption of the sympathetic influences which affect constriction of the blood vessels.

On the other hand, the disturbed vasospastic mechanism of Raynaud's disease, with the lowered temperature in the affected extremity, the cold, clammy, cyanotic digits and the pain from anoxemia, quite definitely demonstrates the diminished blood supply which follows increased sympathetic activity, and its effect upon the blood vessels of the extremity. Although increased adrenalin secretion is probably the cause of this increased vasomotor discharge, it seems quite clear that sympathetic control of the extremity is exerted entirely through the vasoconstrictor fibers to the blood vessels.

This same mechanism that controls the rate of blood flow in the extremities is apparently the chief factor in the sympathetic control of various organs and glands within the body cavity. Claude Bernard, in 1877, first showed that cutting the splanchnic nerves increased the blood flow to the kidney with increased secretion of urine. This observation has been confirmed more recently by Quinby, Sangree, and Hess, and other observers, both in animals and in man. All investigators agree that sympathetic denervation of the kidney causes no change in the elimination by the kidney of salt, urea, and many other substances. These findings suggest absence of actual secretory fibers to the glomerular tubules, and that the splanchnic nerve's only action on the kidney is to control the amount of blood flow through the renal vessels.

This action of the autonomic nervous system upon blood vessels is again demonstrated in the sex organs where sexual excitement is accompanied by engorgement of the blood vessels to that region. Kuntz showed, in 1929, that although the ovary is abundantly supplied with nerve fibers, the distribution of these is limited to the blood vessels, and that the engorgement of all pelvic organs is the direct result of sympathetic action upon blood supply. This physiologic fact that the sympathetic nerve supply is chiefly directed to the control of blood flow to the extremities, organs and glands in various parts of the body, seems to be the real basis for the hope of lowering blood pressure in cases of true essential hypertension.

RENAL VASOCONSTRICTION A FACTOR

Further study of the sympathetic influence upon the circulation has led to the discovery of another mechanism, renal vasoconstriction, which appears to be a factor in the production of essential hypertension. The production of renal ischemia by clamping the renal arteries in dogs has produced an experimental form of hypertension that is similar in many respects to essential hypertension as seen in man. Two workers have thrown considerable light upon the underlying problem of hypertension. Richards has recently shown that stimulation of the splanchnic nerves will increase aortic blood pressure by causing vasoconstriction of the afferent artery to the glomerulus. This, of course, produces diminished glomerular pressure with consequent impairment of kidney function. It was previously thought that essential hypertension was due to a generalized vasospasm of the entire arterial system. This is the first time that it has been shown that constriction of a single portion of circulatory system will result in hypertension.

Supplementing these observations, Goldblatt, and his co-workers, in a group of very carefully controlled experiments, have produced and maintained hypertension in a group of dogs for an average period of over one year. He accomplished this by producing constant renal ischemia with a clamp upon the renal arteries. He has shown that it is essential to produce renal ischemia rather than limit the circulation to other parts of the body; for vasoconstriction of other large vessels like the splenic and the iliac arteries failed to alter the blood pressure.

While Richards and Goldblatt have not as yet explained the mechanism of this elevation of blood pressure, they have shown that renal ischemia is a factor. Since renal artery vasoconstriction produces hypertension and since splanchnic nerve stimulation increased blood pressure while decreasing kidney function in experimental animals, it logically follows that there may be some cases of hypertension in man due to renal artery vasoconstriction. These cases should improve from splanchnic nerve section by increasing kidney circulation and lowering blood pressure.

ADRENAL INFLUENCE

The influence that the adrenal glands exert in the production of hypertension is not definitely known. Many facts point toward these glands as being intimately associated with the production of hypertension. Embryologically the origin of the medullary portion of the adrenal, and of the sympathetic nervous system are identical. Their cells show similar histologic structure. Epinephrin, which is elaborated in the medullary portion of the gland, exerts its physiologic effect primarily upon the muscles which constrict the blood vessels which in turn are innervated by sympathetic fibers.

Koehler has observed that the adrenalin content in the suprarenal glands removed at operation in a small series of hypertensive cases is roughly proportional to the elevation in blood pressure. Although some of the glands contained less adrenalin than is usually considered the normal value, his patients with the highest blood pressure had the most adrenalin in their suprarenal glands, while those with the lower pressure readings consistently had less adrenalin in their glands.

Pincoffs has reported two cases of medullary tumor of the adrenal associated with severe hypertension. Removal of the tumor in both of these cases resulted in return of normal blood pressure. Porter, Shipley, and Belt have also reported similar cases of medullary tumor accompanied by hypertension. The vast majority of cases of hypertension, however, show no tumor of either adrenal. Crile and Goldzieher have maintained that hyperactivity of the medullary portion of the adrenal was the fundamental cause of this elevated blood pressure, and have likened the condition to hyperthyroidism. Aside from the occasional medullary tumor, no definite pathologic change has been discovered to date in the adrenals of individuals suffering from hypertension. The analogy between the thyroid gland in hyperthyroidism and the adrenal gland in hypertension does not seem to be justified.

Other evidence tends to show that the adrenals exert little or no influence in hypertension. Hines and Brown have shown that bilateral adrenalectomy in dogs does not prevent the pressor response to cold. The consensus of opinion, as represented by the works of Page and Heuer and Soma Weiss, seems to be that there is no evidence of an increased amount of pressor substance in the blood in essential hypertension as determined by either chemical means or vascular responses.

However, the embryologic development and the histologic structure of the adrenal medulla, with its large sympathetic nerve supply, lead the careful observer to conclude that there is some definite relationship between the adrenal glands and the autonomic nervous system.

ADRENAL SURGERY

Surgical attempts to control hypertension to date have consisted in operations upon the adrenal glands and upon various portions of the sympathetic nervous system.

Over twenty years ago Crile practiced partial adrenalectomy and denervation of the opposite adrenal to control hypertension. He writes that his results have been unsatisfactory and two years ago he gave up partial adrenalectomy and denervation for resection of the splanchnics. De Courcey, at the present time, champions the cause of the adrenal. He has advocated and practiced subtotal bilateral adrenalectomy with striking immediate results. White feels that his cases have been followed for too brief a period to draw any conclusions as to final results. Lahey, Smithwick, and Palmer have been unable to duplicate the favorable results of De Courcey and have given up the operation. Ussher has observed favorable results from bilateral subtotal adrenalectomy in a single patient carefully observed and followed for over a year. Koehler records a striking drop in blood pressure following bilateral adrenalectomy in a case followed for six months. It is too soon to discard the adrenal entirely.

It is improbable that bilateral adrenalectomy will have many advocates until its superior advantages over other procedures are shown, for the immediate operative risk in adrenalectomy is considerable, several operative deaths have occurred, and the danger of acute adrenal insufficiency developing is very great.

SYMPATHETIC SURGERY

Many observers have thought that interruption of the vasoconstrictor influences to a large portion of the vascular bed would have a depressor effect in early cases of essential hypertension. As the splanchnic nerves control a large portion of the visceral blood supply, they have been among the first objects of surgical attack.

Danielopolu first suggested resection of the splanchnic nerves for hypertension in 1923. Pende, in 1925, proposed section of the left splanchnic nerves, and Pieri, in 1930, actually did unilateral section of the splanchnic nerves for hypertension. Peet was first in this country to do bilateral resection of the splanchnics for hypertension, and has reported one hundred patients upon whom this procedure has been carried out in the past three years. Craig has also advocated a similar operation.

The results obtained by surgeons to date have been quite uniform in that section of the splanchnic nerves has resulted in an immediate drop of at least forty to fifty points in the systolic blood pressure, but in many cases this improvement has been only temporary and careful observation warrants the belief that either insufficient fibers have been removed or else regeneration has taken place. Adson and Mixter have both reported cases in which rhizotomy of the posterior roots of the lower dorsal and upper lumbar segments have resulted in marked fall in pressure that is apparently permanent, so that it is quite evident that interruption of enough sympathetic fibers will lower the blood pressure.

OPERATIVE TECHNIQUE

The technique that Peet follows for resection of the splanchnic nerves consists in bilateral removal of a section of the greater splanchnic nerve about eight centimeters long, together with excision of the tenth, eleventh, and twelfth dorsal sympathetic ganglia, and the lesser and least splanchnic nerves, if present. This operation is done above the diaphragm through a posterior incision with resection of small portions of the eleventh rib, and is accomplished with a minimum of shock to the patient.

Adson and Craig of the Mayo Clinic advocate division of the splanchnics below the diaphragm with removal of the first or second lumbar sympathetic ganglia to interrupt the ganglionic chains, and more recently have combined this operation with partial adrenalectomy.

We are considerably stimulated in the study of essential hypertension by the various attempts that have been made to attack the problem surgically. It is quite evident from the variable results which have been reported that we have not found the ideal operation.

INCOMPLETE DENERVATION

Failure in many instances would appear to be due to incomplete removal of all the sympathetic nerve supply. We must remember that the autonomic nervous system is not a separate and distinct unit, but that it has many connections with the central nervous system. The splanchnic nerves especially are made up of many different preganglionic fibers which regenerate rapidly unless the cell bodies from which they arise are destroyed. Smithwick, Freeman, and White have shown that regeneration of preganglionic fibers takes place within a week. Bard feels that the secretory fibers going to the adrenal medulla regenerate very rapidly. It is quite certain from our present evidence that an adequate drop in blood pressure can be obtained in many hypertensive cases if sympathetic fibers can be completely and permanently removed from an adequate visceral area. Both Adson and Mixter have shown that posterior rhizotomy lowers blood pressure, but is too crippling an operation for practical use. It would appear that more complete removal of the splanchnic nerves is the next logical step in this approach. This, no doubt, has been in the minds of other workers, but we are not aware that the procedure has been carried out.

FACTS FAVORING EXTENSIVE GANGLIONECTOMY

Holman has observed that section of the major splanchnic nerve in man consistently accounts for a marked immediate drop in the systolic blood pressure, while section of the splanchnic minor, which innervates chiefly the adrenal glands, is accompanied by relatively little change. The major splanchnic is the main nerve supply of the renal blood vessels, and section of it probably causes vasodilation of the renal afferent arteries with increased renal circulation, and subsequent lowering of the systemic blood pressure. The splanchnic nerves are composed chiefly of preganglionic fibers, which regenerate rapidly in animals and presumably in man unless the cells from which they arise are destroyed. Section of these nerves should be accompanied by removal of the fifth to twelfth dorsal sympathetic ganglia to effect permanent denervation. The present operations of removing only the tenth to twelfth dorsal ganglia divide only the origin of the splanchnic minor and least nerves, as the splanchnic major receives fibers from the fifth to ninth dorsal ganglia inclusive. The present operation is, hence, an incomplete denervation.

This operation can readily be performed through a posterior incision, removing a section of the seventh rib in a similar manner to the present operation for removing the lower dorsal ganglia. It is true that all these procedures have possible grave dangers in the disturbances of motility of the gastro-intestinal tract, and altered secretion of other glands and organs innervated by the splanchnic nerves. However, section of the splanchnic nerves and removal of sympathetic ganglia do not carry the immediate operative mortality associated with adrenalectomy, or result in extensive paralysis of the abdominal muscles that follows rhizotomy. Until further study reveals more of the etiology of this condition, this procedure would seem warranted on some of the cases of hypertension which are not responding to more conservative measures.

SUMMARY

1. While the etiology of hypertension is unknown, the physiologic and pathologic changes characteristic of the disease have been reviewed.

2. The sympathetic nervous system plays a large part in the control of blood pressure. Increased sympathetic discharge or altered adrenal secretion would appear to be a large factor in the production of hypertension.

3. Present operative attempts show promising results in a large number of cases and warrant careful study of all factors involved.

4. Further modification of present procedure is suggested, based upon our past experience and anatomic facts.

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DISCUSSION

Alfred E. Koehler, M. D. (317 West Pueblo Street, Santa Barbara).—Doctor Findlay has presented a timely review of an exceedingly important problem. The internist will have to concede, at least for the present, that the surgeon has made an aggressive attack on the hypertensive problem that merits consideration as a most promising therapeutic measure. The present methods of approach, either sympathetic resection or suprarenal surgery, will be instrumental after the elapse of some years in yielding information not only as to the therapeutic value of these procedures, but as to the etiology of hypertension.

Our approach in Santa Barbara has been largely that of bilateral partial suprarenalectomy. Some of our cases have gone from one to two years after operation, and there can be no doubt as to the dramatic reduction in blood pressure. As yet we have seen no evidence of suprarenal regeneration. Our policy has been to wait at least three months between the first and second stage, thus giving sufficient time for complete organization of the gland remnant. We believe this to be highly important in reducing mortality.

We have been prejudiced against sympathetic resection for the following reasons: (1) The fibers cut are postganglionic and, therefore, will regenerate in a comparatively short period of time. (2) Sympathectomy, after a period of time, markedly increases the vascular sensitivity to epinephrin. (3) Relief after lumbar sympathectomy is only visceral and, consequently, does not relieve peripheral arteriole spasm. Lowering of systemic blood pressure without removing peripheral resistance must result in diminished circulatory efficiency in these tissues. (4) Visceral sympathectomies may interfere in bowel innervation and function.

Of utmost importance in any procedure is thorough observation and study of the various factors related to hypertension for long periods, both before and after operation.

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Franklin R. Nuzum, M. D. (Cottage Hospital, Santa Barbara).—Limiting this discussion to conclusion No. 2 of the summary, that "the sympathetic nervous system plays a large part in the control of blood pressure," and "increased sympathetic discharge or altered adrenal secretion would appear to be a large factor in the production of hypertension,'" the notion that an increased production of adrenalin is an etiologic factor in hypertension is of long standing. Numerous attempts have been made to measure the amount of adrenalin in the blood stream. There are now recorded upward of one hundred such chemical tests. The number bespeaks the nonacceptance of any one. The biologic method of assay is difficult and time-consuming in technique. By such methods it has been determined that the concentration of adrenalin in the blood leaving the adrenal vein is one part to 350,000; in the circulating blood, the concentration is about one part to 100,000,000. With such a dilution, it has been, and is as yet impossible to say that adrenalin *per se* is associated with the etiology of hypertension.

Many physiologists, especially Cannon, believe that adrenalin is discharged intermittently during times of fear, anger, etc. Their notions are opposed to this agent's being an etiologic factor in hypertension. It is fair to say that the thesis remains to be proved; that adrenalin is etiologically important in this situation, and that only time will prove or disprove the efficacy of the surgical measures now being advocated for the treatment of this widespread and important condition.

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E. F. Holman, M. D. (Stanford University Medical School, San Francisco). — The problem of hypertension has been ably presented by Doctor Findlay. Ignorant of its etiology, clinicians are groping rather blindly for some method more effective than any medical treatment so far presented. At present one can predict with considerable assurance the probable outcome in a given case, treated or untreated. To modify the hitherto inexorable progress of the disease, various operations are being employed, obviously empirical, since the cause of hypertension is unknown. Such empirical measures can result only in a marked diversity of results.

The reported successes following splanchnicectomy are encouraging, yet again, one cannot predict with any certainty what the outcome will be. The tangible benefits in our experience have been a definite subjective improvement in all, but a marked lowering of the blood pressure in only two of the eight cases subjected to this operation. Such experience will undoubtedly tend to restrict the operation much more rigidly to a narrow group, namely, younger patients who show few evidences of peripheral and retinal arteriosclerosis and a minimal damage to the kidneys. Because of its experimental nature, the operation should not be universally applied, but limited to such clinics as are able and willing to conduct all the studies designed to give a better understanding of the disease and a clearer appraisal of all the effects of the operation, beneficial or otherwise, upon the organs supplied by the splanchnic nerves.

⁂

Doctor Findlay (Closing).—I am deeply indebted to the discussers of this paper for their kind criticism, and I wish to express my appreciation to them for reviewing this communication.

Doctor Koehler has given four objections to sympathetic resection. A more extensive ganglionectomy such as outlined in this paper will prevent regeneration of the splanchnic nerves, and thus remove his first objection. His second objection, that the denervated extremity has increased sensitivity to adrenalin, is valid. It appears inconceivable, however, that subtotal removal of both adrenals could come any nearer solving the problem when physiologic responses in normal individuals are obtained from blood serum containing only one part of adrenalin in 100,000,000. Since it has not been demonstrated that all of the pathology of essential hypertension lies in the capillary bed, or that increased adrenal secretion is the cause, his third objection holds against adrenalectomy as well as against sympathectomy. His fourth objection should not be ignored; but Cannon's work on animals and the clinical observations upon human patients who have been subjected to extensive sympathetic surgery, fail to show any serious interference with the function of the gastro-intestinal tract.

I am glad that Doctor Nuzum has reëmphasized that the etiology of essential hypertension is unknown. Any assumption that altered adrenal secretion is a factor in its production is still an unproved theory rather than an established fact.

I am grateful to Doctor Holman for so kindly adding his own experience and reminding us that progress in this field will not be made unless careful and thorough preliminary studies by competent observers precede surgery. A thorough follow-up over a period of several years, with complete reporting of failures as well as successes, will enable us in time to appraise our work.

We are well aware that the answer to this problem may lie entirely outside the field of surgery, possibly in the field of endocrinology or biochemistry.

THE MEDICAL MANAGEMENT OF PEPTIC ULCER*

By George A. Cochran, M.D.
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Discussion *by Lowell D. Snorf, M.D., Chicago, Illinois; Frederick A. Speik, M.D., Los Angeles.*

PEPTIC ulcer seems to be increasing, due to nervous tension attributable to our complex living requirements. The causes may be (1) nervous tension, (2) heredity and family tendency patterns, and (3) focal or residual infections of the blood vessels in the stomach and duodenum. The hydrochloric acid secretion is a necessary concomitant factor for the formation or continuation of the ulcer. The statement that these ulcers are peptic is accepted universally.

ETIOLOGY

Ulcer patients, as a type, display nervous tension and irritability, and do not readily relax. It has been noted that among the Indians of Mexico ulcer is unknown,[1] although coarse and deficient food and unhygienic living prevail. As coronary and sclerotic heart disease occur in the high-pressure brain worker, likewise ulcer is common in this class. Ulcer is not infrequently associated with brain injuries and tumors. Emotional stimuli cause a pouring out of epinephrin, which produces vascular spasm, ischemia and necrosis, and the hydrochloric acid completes the ulcerative processes.

We are often impressed with the history of ulcer in families. I have in mind a family in which the father and five of eight children were found to have peptic ulcer. The male sex is susceptible in the ratio of five or six to one, in large series of ulcer cases.

CLINICAL HISTORY

The manifestations of ulcer are only recognized by a careful clinical history. Experience is a requisite in acquiring a technique of diagnosis. A majority of patients have a history of having had stomach trouble for ten or more years. Occasionally we see cases which have had symptoms for only two or three months, and alertness is essential or the diagnosis may be missed. Cases of short duration must be studied with thoroughness because of the possibility of malignancy. Intermittent dyspepsia over fifteen or twenty years removes them from the latter class. Ulcer patients are characterized by periodicity of symptoms; but as the disease progresses the periods of freedom are shortened, and with the development of the complications of pyloric spasm, food retention, continued secretion, and involvement of deeper structures, the symptoms are persistent.

The distress of ulcer may be described as dull pain, burning in the epigastrium, feeling of fullness or merely discomfort. In uncomplicated ulcer, the pain is sharply localized to the epigastrium.

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* Read before the Nevada State Medical Association at its thirty-second annual session, Elko, October, 25-26, 1935.

[1] Statement of physicians interviewed by author while on tour of Mexico in August and July, 1935.

The relationship of pain is important, usually appearing one to four hours after a meal. The notion that pain coming late in the food-relief-pain cycle is pathognomonic of duodenal ulcer, is not borne out by experience. The exact localization of the ulcer can be made out by aid of the fluoroscope in about 75 per cent of cases.

The distress of peptic ulcer is relieved by food, alkalies, and induced vomiting. When the history obtained is indefinite, it is customary to have the patient keep daily notes of the location of the pain and time of onset, and make a test for relief by an alkali. The final diagnosis will many times stand on a therapeutic test.

DIAGNOSTIC AIDS

The fluoroscope contributes valuable diagnostic evidence. Visualization of a crater in the wall of the stomach, or a niche in the first inch of the duodenum, is direct evidence. A deformed duodenal cap, a large stomach with more than two vigorous peristaltic waves appearing at one time, and delayed emptying are indirect evidence of duodenal ulcer.

No diagnostic technique on the stomach or duodenum is complete without a study of the secretions. There must be an adequate acidity in peptic ulcer. We use a fifty-minute Ewald test-meal. A shredded wheat biscuit or two slices of white bread with 360 cubic centimeters of tap water, is given on the fasting stomach. If the acid values are low, or there is an achlorhydria, a two-hour fractional test is run with the Rehfuss tube. This is repeated with stimulation by histamin hypodermically, if hydrochloric acid is not found. When an excessive quantity of secretion is obtained, or there is a history of night distress, retention is suspected. This may be due to pyloric spasm, organic tissue narrowing at the pylorus, hypersecretion, or inflammatory swelling and edema. These cases are given a motility test-meal. This consists of a large meal of bread, potatoes, roast beef, two cooked vegetables, a fruit, and dessert. At the end of seven hours the No. 38 French tube with large bulb is passed, the stomach lavaged and the contents measured. More than 100 cubic centimeters of food and secretion is evidence of retention. Nausea accompanying migraine or extragastric disease inhibits peristalsis and gives pseudo-retention. The barium meal is a less reliable test of motility because of the fluidity of the material.

SIPPY METHOD

Several systems of ulcer treatment have been devised. The Sippy ulcer management has been quite generally and successfully used. This is the method herein described. The patient is confined to bed, and preferably in a hospital, which insures professional supervision and meets the requirements for physical and mental rest. Three ounces of a milk and cream mixture (22 per cent cream) is given every hour from 7 a. m. to 7 p. m. An alkali is given halfway between these feedings, or from 7:30 a. m. hourly to 7:30 p. m., and at 8 and 9 o'clock. On the fifth day, if all symptoms are relieved an additional four-ounce feeding of a well-cooked cereal, such as Pearls or Cream of Wheat, is given at 8 a. m. On the seventh or eighth day, depending on the nutrition of the patient, extra feedings of a soft egg and slice of white toast and butter is given at 12 o'clock, and a soft custard at 5 p. m. Four ounces of strained orange juice are given with the morning feeding, and four ounces of tomato juice with the noon. At the end of two weeks additional feedings are added. These consist of cream vegetable soups, blanc mange, milk and cream, and well-cooked rice, with cream and sugar. At the end of three weeks, the full caloric requirements of the patient are supplied. These must be foods which leave the stomach rapidly and stimulate the minimum of secretion. This food very largely consists of equal parts milk and cream, cooked or flaked cereals, soft eggs, white toast and butter, orange and tomato juice, baked potato, trout, lamb, vegetable purees, cream vegetable soups, soft custards, and ice cream.

Some cases of simple, uncomplicated ulcer will respond to an ambulatory management of three meals at 8 a. m. 12, and 5 p. m., with an alkaline powder immediately after the meals, and a glass of milk and cream at 10 a. m. and 3 p. m. The five o'clock meal, however, should be light, and consist of only well-cooked cereal with cream and sugar or soft custard and a glass of half milk and cream.

The purpose of the ulcer treatment is to promote healing, and to facilitate this an alkali must be given in sufficient quantity to reduce or completely neutralize the hydrochloric acid. In cases in which there is no evidence of hypertension, kidney dysfunction, or liver impairment, a tablet is given, consisting of twenty-five grains of sodium bicarbonate, fifteen grains of calcium carbonate, and seven and one-half grains of bismuth. A tablet is used because of the attainment of exact dosage. Cases which exhibit some intoxication with bicarbonate are given, instead, tablets of tribasic calcium phosphate twenty grains, and tribasic magnesium phosphate 15 grains. Magnesium oxid is not used because of the tendency to upset the bowel and create nausea from increased intestinal pressure. A rectal examination with the gloved finger is made frequently, and an eight-ounce warm water enema given if indicated.

COMPLICATIONS

The complications of ulcer are perforation, hemorrhage, pyloric spasm, organic tissue narrowing of the pylorus and bulb of the duodenum, inflammatory swelling and edema from an ulcer near the pylorus, continued or hypersecretion, and malignant degeneration.

Perforation requires surgical treatment as soon as the diagnosis is established. The severe abdominal pain, board-like rigidity of the recti, shock, pallor, rapid, thready pulse, and a history of dyspepsia are seldom confusing.

Hemorrhage of a massive character occurs in ulcer, cirrhosis of the liver, and Banti's disease. Only slow oozing is exhibited in malignancy of the stomach. The patient is put to bed and given one-quarter grain of morphin hypodermically every four hours, or sufficient to control restlessness. Twenty grains of calcium carbonate in two ounces of water are given every two hours during the day, and every three hours throughout the night. After four days a regular ulcer management may be instituted. The very rare case in which hemorrhage cannot be controlled by this treatment must be transfused and treated surgically.

Food retention caused by pyloric spasm, edema and inflammatory swelling, the result of an ulcer near the pylorus, either on the stomach or duodenal side, must be treated by the regular ulcer management, and in addition the stomach is emptied of its contents every night at 10 o'clock until nothing is obtained. In severe obstruction cases with continued secretion, a second nightly aspiration at midnight is necessary. If symptoms of intoxication or tetany are exhibited, an infusion of 500 cubic centimeters of normal salt solution with 5 per cent glucose is given daily. If these cases do not give evidence of decreasing retention in four weeks, they are treated surgically.[2] The continued secretion is due to pyloric obstruction, and disappears with the improvement of this condition.

IN CONCLUSION

It is not exaggeration to insist that 85 per cent of peptic ulcer cases can be cured or symptomatically relieved by accurate and adequate medical treatment. To achieve this result, the disease must be taken seriously in its early stages. Persistency in carrying out details and rigid supervision by the doctor are essential for success. There is no disease which is so satisfactory to treat and in which the patient is so fully restored to normal function.

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DISCUSSION

Lowell D. Snorf, M. D. (25 East Washington Street, Chicago, Illinois).—Doctor Cochran's brief review of the management of ulcer is very concise and refreshing. Furthermore, it is timely. The continued importance given to this subject means a more rational attitude of treatment among a larger group of physicians. The failures of medical therapy in general may be attributable, as Moynihan has said, to its insufficiencies, and it at once becomes evident that if one hopes to succeed in the broader sense, to properly cope with the problem at all, he must be on the lookout for the ulcer, prompt at diagnosing it, and capable of planning a treatment. He must be fully cognizant of the potential invalidism ahead of any human in whom an ulcer is present. Early recognition is, therefore, imperative. Why wait for a chronic and recurrent picture to clinch the diagnosis? Why call the early ulcer by such terms as "hyperacidity" and "hyperchlorhydria"? Suspect the lesion, try to confirm it by x-ray, but always be alert to it as a possibility. If you do not, the shock to your vanity is of no consequence, but the time wasted for the patient is important. Recognize the clinical chemical distress syndrome, and remember the relative infrequency with which this is mimmicked by any other abdominal lesion. It will not be your good fortune to recognize all lesions in their incipiency. The chronic peptic lesions are a trial to both the internist and surgeon. Hemorrhage obstruction, continued secretion, and adhesions, are all possible, and one or another probable in the life cycle of the ulcer unless early management is instituted. Any successful treatment of a given case of peptic ulcer demands a careful evaluation of the possible causative factors, such as foci of infection, nervous instability, etc., the nature of the pathology and, finally, the type of treatment best suited for the individual.

The ulcer problem would lose much of its uncertainty if we were fully acquainted with its causes. We may well assume, however, that a local lowered resistance, vasomotor instability, and the peptic activity of the gastric juice are three factors probably constantly present and to which proper treatment can be applied. Only clinical experience and laboratory experimentation can finally answer these questions.

The dissension among clinicians of the past few years regarding the type of treatment most satisfactory has been due in a large measure to the lack of appreciation of the nature and varieties in pathology. The simple, uncomplicated ulcer will respond temporarily to almost any kind of management, while in general, when mechanical disturbances from high-grade obstruction and deep-cratered ulcers develop, surgery is usually required. Meticulous attention must always be given to details of diet and general hygiene and, particularly, a program of education for the patient must be set up.

To date the Sippy management must be considered the therapy of choice. A dogmatic medical routine is as essential to success as the definite program of the surgeon in doing a gastro-enterostomy. To follow a scheme haphazardly is to have no plan at all. A diet slip and a prescription without supervision or detailed explanation means failure. In general, a successful management will depend to a large extent upon a full appreciation of disturbed physiology and the morbid anatomy involved, plus an incorporated educational program for the patient.

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Frederick A. Speik, M. D. (727 West Seventh Street, Los Angeles).—Regarding the article "The Medical Management of Peptic Ulcer," this paper of Doctor Cochran's is, in my opinion, very inclusive. Not much can be added except to say that in acute bleeding of ulcer, bismuth-subnitrate, in large and frequent doses at regular intervals, will shorten the bleeding time.

Let the patient alone as much as possible, and do not give hasty transfusions or intravenous glucose and salt.

IRRITANT FACTORS IN TOBACCO SMOKE

By Emil Bogen, M.D.
Olive View

Discussion *by C. H. Thienes, M. D., Los Angeles; Joseph Goldstein, M. D., Los Angeles.*

The average smoker is not particularly concerned over the remote prospects that smoking may, in his own case, cause or aggravate serious functional derangements or organic lesions such as cardiac arrhythmias, toxic amblyopia, or thromboangiitis obliterans. He is, however, usually anxious to avoid the immediate local irritation of the mouth and upper air passages, which detracts considerably from his enjoyment of a smoke.

Accordingly, although cigarette manufacturers have not hesitated to invoke the physiologic consequences of the absorption of nicotin as talking points in advertising, such as the interference with appetite or the reported rise in the blood sugar, by far the greatest stress in recent campaigns has been placed on the claim that particular brands are devoid of certain irritating properties which are tacitly admitted for tobacco in general.

IRRITATING NATURE OF TOBACCO SMOKE

That tobacco smoke is generally irritating to the mucous membranes may be reasonably inferred from the emphasis which has been placed upon relative freedom from this effect in recent advertisements. In his exhaustive review of "Tobacco and Physical Efficiency," Schrumpf-Pierron simply states that "smokers' laryngitis is too well known to require a description."[1] Even that vigorous defender of tobacco, Dr. Wingate Johnson, admits that "most inveterate smokers show a marked congestion of the pharynx, and many either clear their throat or cough habitually, regardless of the brand of tobacco smoked."[2] Nearly half of a group of subjects given "blindfold tests" some years ago stated that they suffered from biting and irritation, burning, coughing, hoarseness or salivation, as a direct result of smoking.[3]

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[2] Dr. C. W. Mayo makes the statement that forty of the Mayo Clinic doctors have peptic ulcer, none of whom elected to be treated surgically.

In private conversation, as well as in paid interviews, many smokers have insisted that they could recognize a real difference in the irritating properties of the smoke from different brands of cigarettes. There is, however, little agreement among them as to which brands are less irritating. Psychologists have generally found that the average smoker is utterly unable to identify the brand of a cigarette when smoking blindfolded.[4] The uncontrolled subjective impressions of the smoker, accordingly, form an unreliable criterion of the relative irritating effects of different brands.

THE TEMPERATURE OF TOBACCO SMOKE

The irritating effect of tobacco smoke has been ascribed simply to heat "burning" the lips and mucous membranes. This factor appears especially important in connection with the cancers of the lower lip noted in devotees of short-stemmed clay pipes. Certain widely spread advertisements imply that it is also true of cigarette smoke. Experiments performed as indicated pictorially in these advertisements failed to show any significant increase in temperature of the inhaled smoke with an ordinary mercury thermometer.[5] It seems that this advertisement was merely "symbolic," as delicate methods, using a thermocouple, are necessary to show the actual temperature changes in smoke.[6]

Such accurate measurements show that the temperature of the smoke inhaled changes very little from that of room air during the burning of the first quarter of the cigarette. Then there is a gradual rise with successive puffs, until about one-half of the cigarette has been consumed, when the temperature usually reaches about that of the body. It continues to rise at an increasingly rapid rate as the stump of the cigarette is burned, when painfully hot smoke, laden with revolatilized nicotin and other substances previously condensed in the stump, may be obtained. Accordingly, a cigarette holder, with its constant temptation to smoke further down into the stump of a cigarette, may lead to actual burns from hot smoke, as well as to greater absorption of nicotin and other volatile constituents.

With a constant level of suction, as is described in some experiments, the rate of combustion of the tobacco, and consequently the temperature, reached in the smoke at any time would be lowered by increasing the resistance to the passage of air through the cigarette by pressure in filling or mounting it, moisture, or other factors. In actual practice, however, it seems that smokers generally adjust the strength of suction to the resistance encountered, so as to take in about the same volume of air with each puff. Different brands of cigarettes, including so-called mentholated ones, burned at the same rate when the same volume of air was drawn through them, independent of the strength of suction required to do this, and all then gave the same range of temperature when the same length of cigarette had been burned.

The subjective effect of coolness resulting from the application of menthol fumes to the mucous membranes, with, perhaps, a certain amount of temporary local anesthesia induced by this drug, may perhaps be noted when mentholated cigarettes are used; but it is doubtful whether this is a safe or desirable condition.

Special devices for lighting a cigarette without a hot flame, and the so-called "static" method of lighting a cigarette without suction, have been recommended in order to lessen the irritation from the hot first puffs. Since the temperature of the smoke is generally a function of the length of cigarette unburned, and the length is greatest at the time of lighting the cigarette, the slight differences of initial temperature so achieved are probably of little importance, as compared with that resulting from leaving too small a stump.

RÔLE OF NICOTIN

Despite the general belief that nicotin is the chief toxic factor in tobacco smoke, and the extravagant tirades against it by the manufacturers of so-called denicotinized preparations,[7] this substance probably plays little part in the local irritation from smoking. It has long been recognized that the "strength" or irritating properties of tobacco are independent of their nicotin content, so that Porto Rican cigarettes, with a low nicotin content, are frequently regarded as the most highly irritating.

Inasmuch as nicotin in the form of the free base is much more easily volatilized by heat than in the form of its salts, it has been suggested that the absorption of nicotin and the irritation from smoking might be related to the "free nicotin" or nicotin base present in the tobacco, rather than to the total nicotin content.[8] Studies of this "free nicotin" in cigarettes and other forms of tobacco show that this is, as might be expected, inversely proportional to the hydrogen ion concentration of the tobacco, and that actually it is greater in the Porto Rican cigarettes than in the American brands, and lowest in the Oriental cigarettes commonly reported to be less irritating. Treatment of the tobacco with citric acid has been suggested, accordingly, to lessen this factor.

The alkaloidal base, nicotin, is undoubtedly quite irritating, and its application to the skin of a mouse or the eye of a rabbit may give rise to local inflammation and even ulceration. This, however, seems to be entirely due to the caustic effect of its alkalinity, as the same experiment, performed with neutral salts of nicotin, shows no effects. A piece of wet litmus paper held in the sidestream of smoke from the burning end of a cigarette turns deep blue, while one held in the mainstream of the smoke sucked through the tobacco shows no change or turns pink. Some of the irritation to the eyes and upper respiratory tract of bystanders may, perhaps, be due to the alkaline nicotin in the smoke from the sidestream of the cigarettes and cigars smoked, but in the acid mainstream smoke inhaled by the smokers themselves the nicotin would be mainly in the form of its salts, devoid of the irritating action of the base.

EXTRACTION OF NICOTIN FROM TOBACCO

It is chemically possible to extract nearly all of the nicotin from tobacco, but no commercial product so far examined even approximates this. Until some impartial authority, such as the American Medical Association, certifies that the final product actually contains less than, say, 0.2 per cent of nicotin, any one relying on the manufacturer's assurance is in danger of smoking more, and therefore absorbing more nicotin, than if he used the ordinary market brands. A truly denicotinized tobacco might indeed be a boon to sufferers from Buerger's disease, tobacco amblyopia, or other conditions ascribable to nicotin, but might produce as much local irritation as do the tobaccos with a higher nicotin content.

PYRIDIN

Besides nicotin, tobacco smoke may contain a number of other nitrogenous bases, chief of which is pyridin. Pyridin is more volatile and more irritating than nicotin, and may simulate many of its chemical and physiologic reactions. The claim that most of the nicotin in tobacco is converted into pyridin during the process of smoking,[9] however, could not be confirmed, as the heavy white crystalline precipitate obtained by treating smoke solutions with silicotungstic acid indicates that most of the nicotin in cigarette tobacco comes over unchanged in the smoke. The other alkaloids which have been reported in tobacco smoke are present in such small concentrations, according to the workers who have reported upon them, that it is very unlikely that they may be concerned in the local irritation.

AMMONIA

Ammonia may constitute, under some conditions, as much as one-half of one per cent of the smoke in the alkaline sidestream arising from the burning end of a cigarette or cigar, and this probably accounts for most of the irritation of the conjunctiva so noticeable in a small closed room in which much smoking is done. Owing to its absorption and precipitation in the acid stump of the cigarette, however, very little ammonia enters the mouth of the smoker through the mainstream of the smoke, and so this substance may not be held responsible for the effects of the smoke on the mucous membranes of the smoker himself.

OTHER CHEMICAL FACTORS

On the other hand, it is improbable that the small amounts of weak organic acids in the mainstream of the smoke are sufficient to produce any significant amount of local irritation, in spite of recent commercial insinuations.[10] The traces of hydrogen sulphid, methyl alcohol, cyanids, and other substances found only in minute amounts in the smoke may also be neglected. The carbon-monoxid content of cigarette smoke, which is greatest in the mainstream following fast and furious smoking, may perhaps be sufficient to account for some headaches or other systemic symptoms, but has no local effect that need be considered in this connection.

TARRY CONSTITUENTS

Some irritation from smoking has been ascribed to the physical effect of particles of matter in the smoke, tobacco, carbon, etc., acting inertly as material irritants. Special types of pipestems, cigarette holders and filters have been devised to hold back such particles, together with the so-called "tobacco tar" which settles out from the smoke. Chemical analysis indicates that such devices have little effect on the more important volatile constituents of the smoke, and clinical experience indicates that they are ineffective in eliminating irritation.

Although the tarry "tobacco yellow" may be esthetically disagreeable, staining the teeth and fingers, and giving an unpleasant taste and odor to the smoke, there is little evidence to suggest that it is actually irritating when freed of accompanying more volatile and soluble materials. The phenols, cresols, and other substances generally found associated with it may account, however, for a part of the irritation noted. The fact that these oily and tarry constituents of smoke have not been shown to possess high carcinogenic properties does not prove that they may not have other undesirable local or systemic effects.[11]

ALDEHYDS

The aldehyds produced in the course of combustion of tobacco are present in much greater concentration in the smoke from American tobaccos than in that from Oriental or West Indian cigarettes. Formaldehyd and acetaldehyd, which have been identified among them, are undoubtedly irritating, and the amount of aldehyd produced, if calculated as formaldehyd, would be in itself sufficient to account for a certain amount of local irritation. The reputed antiseptic properties of tobacco smoke, which have been subjected to repeated investigation with conflicting results, have been ascribed to the formaldehyd content of the smoke.

FURFURAL

Furfural has been singled out by Henry Ford[12] and others for especial attack, and in view of its known highly irritating properties, and its proved presence in the smoke, even though in minute amounts, it may not be disregarded. The fact that the aldehyds, including furfural, are found in lower concentration in the smoke from West Indian cigarettes, which are generally reported to be more irritating than the popular blends, however, demonstrates that the aldehyds do not, in themselves, represent the chief or only factor in the local irritation from cigarette smoke.

ACROLEIN

The irritating properties of acrolein, produced by the combustion of glycerin, were particularly emphasized by the late Thomas A. Edison. A small amount of acrolein may come from the native fats of tobacco, but more may be expected from the 2 or 3 per cent of glycerin which is added in the course of the manufacture of popular brands as a hygroscopic agent. How much of the glycerine present in tobacco is converted into acrolein has not yet been determined.

HYGROSCOPIC AGENTS

Aqueous solutions, through which cigarette smoke had been bubbled, were reported to cause edema of the conjunctiva of rabbits with all types of cigarettes studied; but those containing added glycerin produced a greater effect, and those to which diethylene glycol had been added instead gave less, than was noted from the smoke of plain cigarettes made without the addition of either of these hygroscopic agents.[13] It might be inferred that the addition of glycerin increases the amount of irritating acrolein in the smoke, while the absence of any hygroscopic agent leads to drying and consequently less absorption of other irritating substances in the stump of the cigarette. Other interpretations involving the technique of the experiments reported, possible chemical interactions between the hygroscopic agents or their combustion products and other irritating components of the smoke, and the pharmacologic action of these agents and their products, with particular reference to anesthetic or dehydrating effects, must be considered, and should be determined in future studies.

The clinical findings in a hundred smokers suffering from conditions attributed to irritation from the smoke, in most of whom the symptoms were reported to lessen or disappear with the use of cigarettes containing diethylene glycol as hygroscopic agent, and to return when glycerin-treated cigarettes were again used, appeared to give clinical confirmation to these claims.[14] Desultory inquiry among smokers, however, revealed quite contrary experiences. This study demands repetition on a larger scale, with the presentation of more detailed and objective observations, before the general validity of its findings may be established.

CIGARETTE PAPER

The common belief, that the products of the combustion of cigarette paper contribute an important part to the irritation from smoking, has led to repeated attempts at its elimination. The smoke produced by burning paper may be less pleasant and more irritating than that of tobacco, and in home-made cigarettes, unskillfully rolled with an extra twist of paper at the end, this may be noticed particularly in the sidestream smoke from the burning end of the cigarette immediately after lighting the cigarette. The actual amount of smoke produced by the burning of the paper in "tailor-made" cigarettes, however, is far too low to be of any consequence in this regard. Moreover, the products of the burning of the paper are, for the most part, removed from the smoke during its passage through the length of the cigarette before being inhaled.

The addition of nitrates or other materials to the paper or tobacco of cigarettes in order to promote combustion has been alleged. Investigations show most cigarette papers to be entirely free of nitrates,[15] while the nitrate content of the tobacco of various cigarettes is very low, averaging less than one-tenth of one per cent. This is less than found naturally in the dried leaves of tobacco grown with rich fertilizer, so it seems that cigarettes are generally not nitrated to enhance burning capacity.[8] The amount of nitrate naturally present in the tobacco, however, may contribute to the irritation from the acid mainstream of inhaled cigarette smoke, as well as, perhaps, to other systemic effects. The fact that the nitrate content is high in Porto Rican cigarettes, often reported irritating in spite of their low nicotin content, while it may be entirely lacking in Oriental cigarettes, makes this suggestion appear plausible.

ARSENIC AND OTHER AGENTS

The arsenic contained in the smoke from American tobaccos,[16] generally originating in the insecticides used on the plant, may be concerned in certain chronic skin lesions, but is in too low a concentration to cause local irritation or acute arsenical poisoning. Sugar or molasses, licorice, and similar foreign materials used in the manufacture of tobaccos, have not yet been shown to cause any increased irritation in the smoke. A host of adulterants, harmless or baneful, which have been suspected or even found in particular instances in the past, cannot be detected in standard brands of cigarettes.

SUMMARY

It appears from this rapid summary of the irritant factors in tobacco smoke that no single explanation applies to all of the phenomena observed. The irritation of the eyes of bystanders is mainly attributable to the ammonia and alkaline content of the smoke given off from the burning end, which are absent in that inhaled by the smoker. Heat, free nicotin, pyridin and other nitrogenous bases, volatile acids, tarry and phenolic substances and particularly the aldehyds liberated in the smoke, of which furfural and acrolein have been especially condemned, may all contribute to the irritation of the mucous membranes of the smoker.

Some individuals seem to relish the biting tang of the smoke as part of the pleasant sensory stimulation from a cigarette. More often this irritation is distinctly unwelcome. Although an occasional cigarette may do little or no harm, there seems to be little medical or scientific justification for the assurance reiterated in many advertisements that certain brands may be safely smoked absolutely without limit. May not the irritant factors in tobacco smoke constitute a natural safeguard, warning the individual against the excessive consumption of tobacco which might lead to more serious results from the absorption of nicotin and other toxic materials in the smoke?

Olive View Sanatorium.

REFERENCES

1. Schrumpf-Pierron, P.: Tobacco and Physical Efficiency. 1927.

2. Johnson, Wingate M.: Tobacco Smoking, J. A. M. A., 93:665, 1929.

3. Bogen, E.: The Composition of Cigarettes and Cigarette Smoke, J. A. M. A., 93:1110, 1929.

4. Goodman, Louis: Thesis. Reed College, Ore. 1928.

5. Smoke Sixteen Per Cent Cooler by Test. Pamphlet. Axton Fisher Co. 1929.

6. Kenyon, O. A.: Theory and Facts of Cigarette Smoking. 1934.

7. Henry, Carl: The True Story of Lady Nicotin. 1930.

8. Bailey, E. M.: Connecticut Agricultural Experiment Station. Bulletin No. 295. May, 1928.

9. Bush, A. D.: Tobacco Smoking and Mental Efficiency, New York Med. J., 99:519 (March 14), 1914.

10. American Tobacco Co. Improving the Taste and Character of Cigarette Tobacco. Pamphlet. 1935.

11. Bogen, E., and Loomis, R. N.: Tobacco Tar, Am. J. Cancer, 16:1515, 1932.

12. Ford, Henry: The Case Against the Little White Slaver. 1916.

13. Mulinos, M. G., and Osborne, R.: Influence of Hygroscopic Agents on Irritation from Cigarette Smoke, Proc. Soc. Exp. Biol. and Med., 32:241, 1934.

14. Flinn, F. B.: Some Clinical Observations on the Influence of Certain Hygroscopic Agents in Cigarettes, Laryngoscope, 45:149 (Feb.), 1935.

15. Thurston, A.: Cigarettes and Their Analysis. Ohio Division of Foods and Dairies. Bulletin No. 3. December, 1923.

16. Remington, R. E.: Hitherto Unsuspected Source of Arsenic in Human Environment, J. Am. Chem. Soc., 49:1410, 1927.

DISCUSSION

C. H. Thienes, M. D. (University of Southern California, Los Angeles).—Wishful thinking and commercial interest have done more to befog the tobacco issue than scientific study can clear in many years. The almost universal use of tobacco forces the medical profession to give serious consideration to any dangers involved; yet the fact that the highest authorities in the land disagree among themselves over the many factors concerned, has made the average physician skeptical of any reports from research laboratories. It is interesting, however, that the official agencies of the medical profession, no less than the manufacturer, seem willing to profit from recent unconfirmed reports from well-known laboratories, in that large display advertisements are appearing in medical publications, even though the same organizations have councils and committees for keeping the drug manufacturer in the straight and narrow path. Certainly, in editorials and in reports of investigating committees and referees, the "denicotinized tobacco" myth has been discredited time and again, but on the basis of one recent experimental report, without waiting for confirmation, advertisements for "denicotinized tobacco" are being accepted.

Advertisements calling the attention of the physician to recent experiments on irritating properties of tobacco smoke are scarcely less objectionable; for, in publishing advertisements of that kind, the medical journal concurs in the suggestion that such experiments have been carried far enough to serve as a basis for the advice of patients by the medical practitioner.

Doctor Bogen's review has been so complete, and his logic so clear, that discussion of points in his paper would be superfluous. I heartily recommend that every physician who is advising patients concerning the use of tobacco keep Doctor Bogen's article close at hand for reference.

Joseph Goldstein, M. D. (727 West Seventh Street, Los Angeles).—It is interesting to note that Doctor Bogen believes the nicotin is not the most irritating factor, but that other volatile fumes are more harmful. The irritations arising from tobacco smoke are fairly well known, giving rise at times to serious conditions, and under such circumstances it may be recommended that the patient cease smoking entirely, such cessation often leading to abatement of the symptoms. Smokers' laryngitis, tracheitis, and pharyngitis are cured simply by withdrawing the irritating factors.

From published accounts of certain tobacco firms, one might be led to believe that their products were a cure for many ailments. Doctor Bogen's studies indicate otherwise.

NEW SIGN FOUND IN TRANSVERSE LESIONS OF SPINAL CORD*

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and

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VASOMOTOR changes have long been utilized to supplement reflex and sensory changes in the localization of disease processes in the spinal cord. Similarly, disturbances in the function of sweating and in the erection of hair follicles, as well as unusual areas of pigmentation, have all been of distinct aid. As has been pointed out by Temple Fay and others, such abnormalities of the autonomic nervous system have often placed more accurately a disease of the cord, be that space-consuming, degenerative, or inflammatory, than the more commonly employed somatic sensory levels.

In 1930, the senior author first noticed in a patient with a somatic sensory level, due to a probable cord tumor, that there was a change of a different kind that could be felt. The skin above this level, which we may designate as normal, felt smooth, soft, moist, pliable, and could readily be lifted between the thumb and forefinger. On the other hand, the skin below the level seemed stiff, "hidebound," dry, and adherent to the subcutaneous layers, so that only with difficulty could a layer of skin be pinched together. It was found that this change could also be sensed by gently trying, with the tips of the extended fingers, to displace a segment of skin on its underlying tissues. Sometimes in patients subsequently studied the transition from normal to altered skin was abrupt, sometimes more gradual over one or two segments.

No reference to such a palpable level has been found in the literature, although this level may have a similar origin to the trophic disturbances and viscerosensory changes described by Pottenger. To describe the new sign we have used the term, "level of skin tension."

Since 1930 we have investigated about one hundred patients in the University of California Hospital and the San Francisco Hospital. The method of procedure has been for one of us to see the patient without knowledge of the location of a somatic sensory level, in fact, usually in ignorance of the presence of any such level. Then, in most cases, the patient has been seen independently by the other one of us, again in ignorance of those findings. Whenever feasible the examinations have been made with the patient both on his back and on his abdomen. Furthermore, the findings have been confirmed by later examinations when possible, and by correlation with other clinical studies supported by roentgen examination, anatomical details at the time of operation, or autopsy. Examination was found to be so confusing over the extremities that observations were made only on the trunk.

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NORMAL CONTROLS

Sixty-four subjects in our group were examined presumably as normal controls. These were patients with various complaints, on the general medical wards of the University of California Hospital. In sixty-one of these sixty-four, changes in skin tension were found over the front or back. In the front there was an increased tension, as a band over the wall of the chest and upper abdomen, the width of which seemed to vary with the adiposity or extent of subcutaneous tissue present. The upper level of this band was just above, or just below, the nipple line, and would usually follow, not the configuration of the ribs, but would parallel lower margin of the thorax. In four cases, for reasons not entirely clear, the upper border of this band of tension reached the T2 segment. Two of these four patients were unusually obese. The lower margin of this band of hypertonus could be felt at a varying distance below the rib-cage, and in some cases extended to the level of the umbilicus. Occasionally the tissue overlying the sheath of the rectus all the way to the pubis seemed to be under increased tension. Below the lower level of the increased skin tension the skin again felt normal.

Over the back the normal controls all showed an area of increase in tension over the lower part, beginning at T8 or T9 segment and extending over the lumbar aponeurosis. In nine patients this level of increased tonus began at a slightly higher level, as high as T5 segment, again for reasons not quite clear. In three patients of our sixty-four control group, no apparent change in skin tension could be demonstrated, either on the front or back. It was noted, further, that where levels of skin tension were found in presumably normal controls, there were no associated pilomotor, vasomotor, or sweating levels.

GROUP WITH TRANSVERSE LESION OF CORD

There were twenty patients with a somatic sensory level and other convincing evidence of disease of the spinal cord. Their diagnoses included both intra- and extramedullary tumors, transverse myelitis of degenerative or inflammatory origin, diffuse arachnoiditis, and fracture of the spine. In these patients a level of skin tension was found which was in fairly close agreement, either with that somatic sensory level or, more often, with a level of change in sweating or pilomotor response. In ten of these twenty patients the level of the process in the cord was confirmed by operation or autopsy or, in the case of spinal fracture, by roentgen examination. In nine of these ten the level of skin tension corresponded exactly with the area of disease, and in one case pointed to a tumor five segments higher in the cord than indicated by the somatic sensory level. In this patient, whose first laminectomy had ended in a fruitless search for the lesion, operation confirmed the suggestion of a higher level of skin tension.

In ten patients with evidence of disease of the spinal cord with a somatic sensory level, no level of skin tension could be demonstrated. In four of these the disease process was in the spine below the lower level of the cord or the cauda equina.

In one patient there was a level of tension, but no other evidence of disease of the cord except for a congenital anomaly of the spine.

That this sign might affect the halves of the body differently is shown by two patients. In one of these patients there was a unilateral hypertonus of the skin, associated with marked constriction of the peripheral vessels on the same side, secondary to a cerebral lesion in the opposite hemisphere. The remarkable features of this case will be reported independently. A similar observation was made in a patient with a nearly complete Brown-Sequard syndrome, due to a fracture of the cervical spine.

What the physiologic disturbance is which underlies this change in skin tension must at present remain speculative. The close correlation between this sign and disturbances in erection of hair follicles, and in sweating, suggest that here we have another manifestation of innervation by the autonomic nervous system. We know, from the work of Beattie, Brow and Long, and others, that sympathetic fibers course down the spinal column in the lateral part of the ventral white matter in close relation to the vestibulo-spinal tract, and that they form frequent synaptic relations with cells in the lateral horns of the gray matter. From there they emerge with the anterior roots, the white rami, and then travel up and down the sympathetic chain sometimes several ganglia before making their synaptic connections with the last neurone. The last neurone, or rather those end neurones which affect the skin, reach the mixed somatic nerves via the gray rami, and then follow a segmental distribution. The wide overlapping known to exist in certain fibers of the sympathetic system may account for some of the discrepancies in our findings. It is conceivable that the altered skin tension is merely a sign of disturbed innervation of all the smooth muscles in the skin and subcutaneous tissues.

Too many of the tests at our disposal depend on the subjective impressions of what may be a comatose, a foreign, or a moronic patient. Any objective test which aids in localizing a pathologic process of the spinal cord would be of value. With that in mind, the level of skin tension is herewith reported.

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MEDITATIONS ON SOME PRESENT-DAY MEDICAL PROBLEMS*

By Alfred C. Siefert, M.D.
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To speak the truth and to shoot straight with bow and arrow, Zarathustra taught the young men of ancient Persia. These were considered manly virtues. Let us, then, select our targets.

The seal of Stanford University in my student years showed a giant sequoia and bore the words inscribed, "Die Luft der Freiheit weht." Later this inscription was changed to "Semper virens." Those who changed it did not know that growth and strength and evergreeness are possible only where freedom's breezes blow, yea where there are storms of freedom. Apply this to the profession of medicine.

A MARXIAN DOCTRINE

One hears so much how medicine must be socialized, communized, and enslaved, for the sake of humanity. A great institution of scientific achievement, a noble tradition of sympathetic helpfulness and strength to be torn down and disintegrated from within to benefit the weak and disinherited and the poor in spirit. Truly, Marxian doctrine, a sword that cuts both ways.

The decadence of our civilization and of our own people has progressed so far that the one thing we demand is "security." Government aid, relief, dole, Townsend plan—in short, we are ready for *panem et circenses* (food and motion pictures) free.

Once we asked for opportunity only, but now meet the vicissitudes of fate by insurance against this and that, and by this and that from the League of Nations to hospital service, nay, medical service insurance.

SCIENTIFIC STANDARDS IN MEDICINE MUST BE MAINTAINED

Government and State medicine may be inevitable. They will indeed be if the medical profession continues to offer compromises. Perhaps the majority sincerely believe that compromise is the only way to make bearable the unavoidable yoke. Would it not be better to accept battle, for to resign one's self without a struggle against that which the spirit rebels is craven.

THE MULTITUDE OF HOSPITALIZATION AND MEDICAL SERVICE POLICIES

Hospital insurance and group health insurance, and as many other types of insurance for which legal advisers can devise the proper terminology, are the order of the day.

Policies of nearly all of them are not sufficiently attractive unless "technical" or other roentgenology and pathology are included. Roentgenology and pathology are the worms that bait the hook; rhinology and obstetrics await their turn, and the entire practice of medicine, when the process will have progressed to its logical and unavoidable conclusion. Meanwhile the worms wriggle—it may be that pathology is already dead. Meanwhile houses of delegates pass resolutions and committees take vigorous stands, and attorneys-general hand down decisions. Let us be grateful to them all, but continue to wriggle.

"In the shadow of your swords, there let your paradise be."

THE FUTURE OF RADIOLOGY

Radiology, an "ancillary branch of medicine"—what are we to expect for the future of our science? Ancilla, a handmaiden. Radiology, a handmaiden. Radiologists, handmaidens. What young man of intellect and spirit will in the future select so menial a career? It hardly seems possible that medical leaders and hospital executives cannot see beyond the tip of their noses. "Take no thought of the morrow!"

We are being told by our own College of Radiology that we must raise the level of our specialty by education and training. This is excellent advice, provided that the contemplation of a contented cow in a hospital or government stable will prove to be sufficient inspiration.

What are knowledge and learning without character?

In the older roentgenologic treatises on the vertebral column we read about "intervertebral spaces." Let us fill in these spaces with tough annuli fibrosi and resilient nuclei pulposi to form a real *backbone*. A good head and a firm backbone are the needs of radiologists, today, beyond all other things.

RADIOLOGISTS SHOULD NOT HAVE PREFERENTIAL TREATMENT

Why should every incipient radiologist have a lucrative hospital job thrown into his lap?

What of the young practitioner of medicine and surgery, must he not fight and possibly even starve his way to success? Is not, perhaps, the complaint that the radiologist is not treated on terms of equality due to the fact that he has not won his spurs in this struggle of the survival of the fittest? Why do so many radiologists act like lackeys?

Rights and privileges are won by conquest. To be a peer among peers is a matter of confidence in one's self, and not of certificates and diplomas nor of condescension by anyone. Let us develop a little pride in our achievements.

RADIOLOGISTS SHOULD BE PHYSICIANS FIRST

"Too many radiologists contact only the patient's films, not the patient himself," says Edward Chamberlain very correctly. Let us remember that we are physicians first and foremost, and secondarily, specialists in radiology. Action upon that advice will contribute much to professional success and economic security. The point of the pen will not then be able to overthrow you.

Practice clinical radiology.

Why are we radiologists so squeamish about accepting responsibility? That is what makes many of us "glorified technicians." Many of our medical confrères do not hesitate to practice "amateur radiology" and take the responsibility. Let us develop at least an "amateur interest" in clinical medicine.

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* Chairman's address before the Radiology Section of the California Medical Association, at the sixty-fifth annual session, Coronado, May 25 to 28, 1936.

Do not throw a patient out of your office because he comes to you directly without a written request for a "flat plate" of this or that. Advise him and refer him to the one among your medical and surgical confrères whom you consider the most competent to handle his case, and do not ask the doctor to limit himself to percussion or auscultation only in making his examination. It is more blessed to give than to be continually receiving, and you will be more respected.

Do not be a "hedger,"—God Almighty hates one; express an opinion, make a suggestion. Your consultant wants someone who will share responsibility with him, not shirk it.

IN CONCLUSION

The targets are numerous, but the quiver grows empty. Let us speed one last arrow on its way—its name, "In Unitate Robur" ("In union there is strength"). Remember the fable of Æsop about the father of seven sons who, by their constant dissension seriously impaired the standing and fortune of the family? The father one day called them together and requested each one in turn to break a bundle of seven rods. Not one of the brothers could muster enough strength to accomplish the feat. Then the father untied the cord that bound the rods together and easily broke each individual rod. The continuance of the Section on Radiology is more important to its members than they think. Let everyone help.

Have I struck my target?

411 Thirtieth Street.

THE MANAGEMENT OF ALCOHOLISM*

By Harry H. Wilson, M.D.
Los Angeles

Discussion *by John B. Doyle, M.D., Los Angeles; H. Douglas Eaton, M.D., Los Angeles; Aaron J. Rosanoff, M.D., Los Angeles.*

A BETTER understanding of the biochemical, sociological, and psychological factors involved in alcoholism is desirable, and is the incentive for this paper.

For the past several years there seems to be an increase in the frequency of medical contact with those who constantly use alcohol to such an extent that it interferes with their business, marital, or social life, or with those who are periodically so addicted as to present a grave problem.

The medical profession must not assume an acquiescent attitude; we are concerned with the responsibility of not only rendering skillful scientific assistance in meeting the problem of the individual, but of properly evaluating the injurious effects of the excessive use or abuse of alcohol upon the community welfare. The medical profession, in times past, apparently has been negligent in meeting its responsibility by the lack of an attitude toward the overuse of tobacco and understanding the importance of certain occupational diseases, with the result that non-medical workers have led the way in finding solutions of these problems. Are we to do the same with alcoholism?

In the past most physicians have been compelled to resort to the use of sedatives or the depressive type of treatment, which consists in the use of apomorphin, bromids, chloral hydrate, morphin, phenobarbital, etc., and the forcing of alcohol upon the patient's consciousness with the idea of producing nausea and an abhorrence that makes the thought of alcohol intolerable. These procedures have, however, only a temporary restraining influence. Physiotherapy, consisting largely of hydrotherapy, with the idea of washing out the patient and literally pummeling him into nonresistance, has a similar temporary value.

THEORETICAL CONSIDERATIONS

It is most important to determine what is and why is an alcoholic. In the years past it was held, and some still hold to the theory, that a chemical affinity develops between the cells of the body and alcohol, and that a cell hunger exists which only can be satisfied by the administration of alcohol; that this chemical hunger supersedes will power and all other factors involved. However, most contributors to the literature of today express the thought that alcohol is only a substitute used in the seeking of relief by a maladjusted personality, and each author presents his interpretation and classification of the various types of broken personalities. Most of us are familiar with the classifications of Freud, Adler, Jung, Du Bois, Ellis, Hart, Cowels, Watson, etc.

PRINCIPLES IN THIS DISCUSSION

From the standpoint of the internist or the family physician, it seems inadvisable in this paper to discuss in detail the various theories concerning broken or maladjusted personalities, but to confine the discussion to a few generally accepted principles:

1. We may assume that the type of individual who misuses and abuses alcohol will find a substitute if alcohol is unobtainable, for the energy of his mental complexes is bound to find an outlet.
2. Alcohol is usually an expression of a weak or unstable nervous system, rather than the sole cause of it.
3. The maladjusted individual will not reach adjustment by or without the use of alcohol, but rather will be harmed by its effects.

THE CLASSIFICATION USED BY THE AUTHOR

In approaching the individual problems, the author has started with the premise that "Life is a series of conflicts between personality and changing circumstances."

Now, what is personality?

It is the accumulative experience derived from tribal, racial, national, religious, familial, adolescent and personal heritage and relationships, with a result as if all these factors formed a mold or an iron helmet into which the ego was poured, each impression leaving an indelible mark to shape the personality or ego of the individual.

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* Read before the General Medicine Section of the California Medical Association, at the sixty-fifth annual session, Coronado, May 25 to 28, 1936.

RESULTS OF THE CONFLICT BETWEEN PERSONALITY AND CHANGING CIRCUMSTANCES

1. The normal is exemplified by one who recognizes values and understands that it is relatively unimportant what happens to him, but that it is very important how he behaves toward what happens to him. In other words, the importance of attitude and behavior is understood; the ability to properly evaluate maintains throughout life.

2. The Attempted Adjustment or Maladjusted Group. This group consists of those who fail in the conflict to maintain a sense of values; and the first subdivision and the largest in number consists of

(a) *The Neurotic.* We are all familiar with the frequency with which symptoms are substituted for failure; this individual, as a defense mechanism, to excuse his or her failures or frustrations, uses illness which permits the justification of ego, and therefore substitutes symptoms for understanding.

(b) *The Genius or Work Substitute Adjustment Group.* This group, much smaller in number, consists of those fortunates who have literally thrown their nervous energy into a selected field of endeavor, with the result that they have so occupied their nervous energy as to permit it to act as a narcotic to obscure the importance of the sense of failure which brought about the maladjustment originally.

(c) *The Religious Zealot.* Here we have a substitution of faith for thinking. Here the inability to evaluate on the basis of logic permits the placing of an all-abiding confidence in a Greater Force as a reason for all of the apparent injustices of life, which are being worked out, and eventually reparation will be made by this Great Unseen Force. It is fortunate indeed for mankind that faith exists.

(d) *Drug Addicts.* The use of narcosis to inflate the ego or depress the veneer of culture and civilization is so well known and so closely allied to alcoholism as to permit its being considered in the same classification as (*e*) the liquor addict.

(e) *Alcohol Weaklings or Addicts.* The susceptibility of man to alcohol is variable. In its mild usage it may appear to be a blessing. Bernard Shaw states "that the common lot of the workingman in England is so hard, with his lack of education, lack of cultural development, too early marriage, too many children, inadequate income, long working hours, supervised by a dominant boss, going home where a shrew of a wife berates him for his inability to provide things that the more fortunate Mrs. Jones has, leaves a man with his ego so deflated that he finds solace in drink for a few hours in which he thinks himself a king."

This illustration seems to be nearly the only justification for the use of alcohol. The higher degrees of intoxication which permit the maladjusted personality to try to crawl into the neck of a bottle to hide from his problems in narcosis is the usual problem which confronts the family doctor.

(f) *Psychosis Group.* The last group in my classification of broken or attempted adjustments consists in the suicides, criminals, and the more or less completely broken personalities, many of whom are classified as insane, some called dementia praeçox, others the depressive types of melancholia, etc. A considerable number of these may be corrected by proper understanding.

INVESTIGATIONS ON ABSORPTION OF ALCOHOL

Turner, Bogen, and others have proved:

1. That the rate of absorption of alcohol in the various tissues is practically the same.

2. That the degree of absorption of alcohol in all tissue cells, chiefly the brain, liver and kidney, is almost identical.

3. That blood alcohol determinations evidence that alcohol is practically eliminated from the blood stream in twenty-four hours.

4. That the blood alcohol content is in direct proportion to the degree of intoxication.

In my own experience, based upon a chance observation that several patients recovering from the abuse of alcohol had many symptoms similar to those of hypoglycemia or hyperinsulinism, blood-sugar studies were made and in every instance there was a rather constant finding of approximately 60 to 70 milligrams of sugar to 100 cubic centimeters of blood. It is a well-known fact that hypoglycemia follows poisoning by such drugs as carbon tetrachlorid, chloroform, guanidin, etc., by retarding glycogenesis in the liver, and that the liver has the bulk of work in handling alcohol; that overloading of the liver by alcohol retards glycogenesis; that at the same time the constant or excessive use of alcohol produces an excessive insulin secretion. It is readily understood, then, that the after-effects of alcoholism may be largely attributable to the overloading of the liver, the overactivity of the pancreas and their failure to assist in taking care of the alcohol, resulting in the production of nausea, tremor, vasodilatation, excessive perspiration, mental depression, etc.

It was the result of these observations which caused me to refrain from the commonly used depressive type of "knocking out" a patient by sedatives, and to substitute a supportive type of treatment.

TREATMENT OR MANAGEMENT

The treatment is divided into two definite phases: first, the biochemical; second, the psychologic. Naturally, they overlap.

An injection of colloidal calcium and dextrose is given two to four times daily for approximately three days, for the purpose of obtaining an improvement in glycogenesis, combating hypoglycemia, with the prevention of the accumulation of lactic acid in the tissues. It also relieves the headache, markedly controls tremor, and (where tests have been made) the blood-sugar level rises. In addition, general hygiene measures are instituted together with specific therapy, dependent upon the findings arrived at as the result of a careful history and physical examination.

This procedure accomplishes several things:

First: The patient must report to the physician two or three times each twenty-four hours, and in a condition of sobriety.

Second: A definite program has been instituted in which the patient's confidence must be obtained.

Third: It permits of the opportunity for closer acquaintanceship, with the gradual working out of the reasons for maladjustment under conditions which allow the patient to freely give his confidence to the physician.

Fourth: Each patient has obtained tremendous physical support with great alleviation of the symptoms of the "hangover," and the calcium and dextrose appear to take away the overwhelming desire for another drink, which so frequently obtains in the confirmed alcoholic. After a few days, when the patient is feeling physically well and mentally better, and does not hold such a morbid viewpoint concerning himself, and is beginning to look to his physician with a sense of respect and confidence, a careful presentation of the psychologic factors of maladjustment is made.

This, of course, is the most important part of the management of alcoholism, and success or failure is dependent upon the understanding of the physician and his ability to express himself clearly, simply, and in a manner comprehensible to the individual being dealt with. I wish to stress the importance of not overestimating the patient's intelligence or knowledge, and the need for avoiding confusing terminology, and the necessity of confining the discussion to factors that pertain to the patient's life, which have been brought out in the preliminary discussions and may be easily recognized by the patient. This whole approach is an attempt on the part of the physician to supply an abbreviated psychoanalytical study, and its importance cannot be overstressed.

FACTORS TO BE CONSIDERED IN DIAGNOSIS

In my own contacts I have attempted to arrive at a tentative diagnosis as a result of the observations made during the preliminary supportive phase of the treatment, stressing three factors:

1. Is the degree of alcoholism such as to leave the will still predominant?
2. Has it reached a stage where it has affected the veneer of culture or civilization?
3. Is the degree of alcoholism an expression of a hereditary degenerative type?

I am frank to confess that I have felt competent to approach only the first two phases, and that the limits of my understanding of the psychologic factors have prohibited me from attempting to deal with the most severe stage of maladjustment.

One other determining factor is: Does the patient have an incentive or anchor that gives him something to work with? I mean by this the need or desire to support a family that he loves, an abiding faith, etc. For without an incentive on the part of the patient there is little desire on the part of the physician, because the effort involved in working out these problems is great, and the time consumed must be considered, for most of us dislike wasting time and energy where the promise of results seem so slight.

I use graphic illustrations to explain to the patient how he acquired the maladjustment in his personality, and how it was caused by his failure to adjust to changing circumstances; where alcohol entered into the picture as a substitute for understanding, and how one must substitute work, love, play, and faith, or reëstablish a sense of values which puts him back into the normal class to obtain permanence in the abstinence from liquor.

IN CONCLUSION

An analysis of some ninety-odd cases that form the basis for this paper indicates that the greatest success follows where the use of alcohol is occasioned by falling into the error of social drinking, with the failure of the individual to understand that he has become a victim of a common physiologic factor: the ease with which impulses make use of the association fibers, so that these individuals who fall into the habit of taking a drink under certain circumstances or conditions gradually drink excessively until it takes the place of reasoning, or they reach the stage where the pathologic effects of maladjustment have become relatively fixed. With these people who fall in the first degree of intoxication, the will is still predominant, the incentive or anchor present, and when an explanation is made and an understanding is arrived at, the cure is relatively simple and assured.

The second degree of intoxication offers more difficulties, because the individual has become pathologic, is a liar, completely untrustworthy, cheats and steals even from himself, has lost incentive and self-respect. Success in this field follows only where strong supportive factors are present.

The third stage, in my mind, is almost entirely the problem of the psychiatrist or neurologist, and requires institutional care, the hope of rehabilitation being slight.

1919 Wilshire Boulevard.

DISCUSSION

John B. Doyle, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Wilson's observations concerning the resemblance of the more severe symptoms of alcoholism, and those of hypoglycemia or hyperinsulinism, are very interesting. For many years I have felt that some of the more profound disturbances, such as delirium, were due to quantitative and qualitative starvation. Accordingly, I have prescribed hot milk and cream, liberally seasoned with powdered capsicum, and fruit juices on alternate hours. More recently a concentrate of vitamin B has also been employed. When sedation has been required, paraldehyd has usually proved adequate. Spinal puncture is indicated when agitation is more marked than usual.

The problem of alcoholism is the problem of addiction in general. It is only the cultural characteristics of nations which determine that opium and its derivatives shall be the dominant addiction of the Orient, and alcohol of the Western World. While it is probably true that only individuals possessing a certain innate peculiarity become addicted to depressants, with the effects of which they are acquainted, it seems certain from clinical experience that, until the span of life is complete, predictions as to the presence or absence of this quality cannot safely be made.

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H. Douglas Eaton, M. D. (1136 West Sixth Street, Los Angeles).—Alcoholism is a problem with which all physicians, whatever their specialty may be, are brought into contact. The existence and growth of quasi scientific and commercialized, so-called "cures," demonstrate both the difficulty of the problem and the inadequacy of scientific medicine in meeting it. Those of us who, through a lack of interest or knowledge, do not wish to handle the therapy of alcoholism ourselves should at least be prepared to advise in general terms and to steer the alcoholic into competent medical hands.

Doctor Wilson's approach to the alcoholic problem is an interesting and stimulating one. Certainly any adequate therapy of alcoholic addiction must take into consideration the personality of the addict, as well as the chemical and pathologic changes that are present in varying degrees. Treatment aimed at the elimination of the last-named factors rightly initiates our handling of the individual case. Doctor Wilson's suggestions along this line merit further observation and study in a larger series of cases.

The subject of individual maladjustments and personality disorders is too broad to be covered in the present discussion. We can agree with Doctor Wilson that success in the handling of such cases depends on an adequate analysis of the individual case, followed by reëducation, both mental and physical. Such treatment offers the best, indeed the only, chance of permanent cure, and undoubtedly succeeds in a percentage of the milder cases of alcoholism.

The truly pathologic type of alcoholism eventually falls into the hands of the neuropsychiatrist and is, in my experience, one of the most difficult problems he is called upon to meet. Here one is confronted not only with lack of coöperation on the part of patients—a large majority of whom consult us, not because of their own desires, but because relatives or friends insist upon it—but frequently with actual inadequacies in constitutional make-up and definite psychoses. In another group, despite a potentially normal make-up, the chemical and pathologic changes mentioned by Doctor Wilson have become irreversible rather than reversible. In such cases a controlled environment, often for a considerable period of time, is requisite for successful treatment.

Doctor Wilson has outlined a viewpoint and method of approach to the problem of alcoholism which should prove of definite value to every internist dealing with these cases.

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Aaron J. Rosanoff, M. D. (1908 Wilshire Boulevard, Los Angeles).—A rather pessimistic note is to be detected in Doctor Wilson's paper, especially with reference to the more severe types of cases of chronic alcoholism. In my opinion this is justified by many discouraging experiences.

Millions of people drink, yet only thousands become chronic alcoholics. It is obvious that the nature of the soil is an important factor in etiology. To what extent this is inborn and to what extent this originates in social environment is a question that no one could answer fully, but undoubtedly both inborn and environmental factors combine to produce the phenomenon of chronic alcoholism in a small percentage of individuals.

I have had an opportunity of discussing with Doctor Wilson the special plan of treatment which he has outlined in this paper. I have had no personal experience with it; but I have witnessed the trial of this treatment in three cases which I had had under my care. The results were unsatisfactory, both while under my care and while under the treatment described by Doctor Wilson.

In an experience extending over a third of a century with more than two thousand cases of chronic alcoholism, I, too, have come to be pessimistic about the prognosis. I believe there is no such thing as a cure for chronic alcoholism. It is true that about 10 or 15 per cent of the cases do recover, but such recovery in my experience is to be attributed not so much to the method of management as to a more than usually favorable soil in the temperamental make-up of the individual.

As alcoholism continues it invariably leads to further deterioration of temperament and character, and thus a vicious circle is established until a point is reached eventually when the prognosis becomes quite hopeless. In other words, something might be accomplished in a limited percentage of cases of recent origin, but hardly anything in cases of old standing.

Recently I had an occasion to review a Russian contribution on the subject of alcoholism (*American Journal of Psychiatry*, 92:992, January, 1936). Under the special conditions which now prevail in the Soviet Union, real success on a large scale has been attained in the management of alcoholism. Drunkenness, acute and chronic, has always been a vast problem in the Russian Empire. I doubt if anything of practical value is to be gained here from a study of the management of this situation as it is organized in the Soviet Union today; their methods could not be applied in this country.

THE LURE OF MEDICAL HISTORY[†]

CALIFORNIA'S FIRST MEDICAL SURVEY: REPORT OF SURGEON-GENERAL JOSÉ BENITES[*]

A TRANSLATION[‡]

By Sherburne F. Cook, Ph.D.
Berkeley

In 1804, the surgeon-general at Monterey, José Benites, was called upon by the Viceroy to make a report on the state of health of the whites and Indians in the California settlements. This report, or "Informe," forwarded under the date of January 1, 1805, has been frequently mentioned by persons writing on California medical history, and small portions were translated by Father Zephyrin Engelhardt.[1]

However, the complete document has never been translated, nor have the comments and criticisms of the royal director of the treasury and the Royal Medical Board ever received attention. These, in themselves, throw valuable sidelights upon the status of the medical profession and public health in the early nineteenth century. All three documents are to be found as copies in the Santa Barbara Archives, Vol. 3, pp. 4-12, as they are at present bound in the Bancroft Library, Berkeley.

[†] A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

[*] From the Division of Physiology, University of California Medical School, Berkeley.

[‡] Editor's Note.—Where and how the author found this interesting original report is stated in the following letter:

To the Editor:—Not long ago, while looking over the Santa Barbara archives, I came upon the original Benites report of 1805, together with two other related documents. Since this was the first comprehensive report ever rendered by a physician concerning the state of health of the inhabitants of this State, and since it has never appeared as a whole in print, I have translated it, together with the comments of the Royal Treasurer and the Royal Medical Board of Mexico City. I may add that the report contains what, as far as I am aware, are the earliest case histories from the State as described by the attending physician.

Thinking that these documents might possibly be of interest to the medical profession of the State, I am forwarding translations herewith, submitting them for publication, if you think desirable, in California and Western Medicine.

Very truly yours,
S. F. Cook.

Division of Physiology,
University of California Medical School.

[1] *Missions and Missionaries of California*, Vol. 2, p. 608. See also Cephas L. Bard: *A Contribution to the History of Medicine in Southern California* (Ventura, 1894), p. 18; George D. Lyman: *California Hist. Soc. Quarterly* (1925), Vol. 4, p. 150; and Henry Harris: *California's Medical Story* (San Francisco, 1932), p. 28.

REPORT OF SURGEON-GENERAL JOSÉ BENITES

Benites' report is as follows:

Monterey, Jan. 1, 1805.

Your Excellency:

I am complying with the superior order sent by the kindness of your Excellency for the betterment of humanity, dated September 4, 1804, which has been given to me by the Governor, Don José Joaquin de Arrillaga, that I should report on the various illnesses which I have observed and their causes. I state they are the following:

First syphilis, or French malady (morbo galico); humid climate with continuous heavy fogs, and great cold. The causes of the first are the use of polluted water employed for all preparation of food, the lack of cleanliness in their homes due to disinclination toward such, their lack of space, and the presence of an estuary (inlet), near the Presidio, without communication to the sea except in the winter, and even then so stagnant that it spreads putrefaction, which is the origin of diseases. The waste water from the laundry, which is located about four varas (yards) from the above-mentioned estuary, serves for the preparation of food, good water being a league and a half distant. The infrequent use of vegetables, or lack of taste for them; the constant exposure of this people to the humidity, fogs and the rains in their season; and the frequent habit of drying their clothes on their bodies by natural and artificial heat are causes for corruption.

The second I ascribe to the first cause.[2] The third, although not very frequent, is produced by the excessive cold, which in suppressing perspiration is cause of a congestion about the lungs when they themselves are exposed to the effect of the cold. This happens much more when inflammatory sciatica prevails, due to overexertion and loss of sleep. This I observed from the tenth of September, 1803, until the middle of January, 1804, during which time the winter was very severe and rainy. They all (the sick) recovered due to my assistance, except a sexagenarian whose name was José Soberanes, a retired soldier of this company, in whom at my arrival the pneumonia or inflammation of the chest of which he suffered had terminated as gangrene and caused his death, in spite of the treatment given him to alleviate the terrible progress of the inflammation. Xavier Avila, a soldier of the above-mentioned company, suffered from a dysentery for two months. I assisted him with the most efficacious medicines which I have at my disposal, and according to the precepts of the most learned authorities, and succeeded in restoring his health to the point where he was able to go across the plaza; and I advised him to follow a reasonable diet. But paying attention neither to my advice nor his own discomfort, he gave himself up to eating foods hard to digest, and in a few days suffered a relapse of the same illness, only this time more severe than the first attack. I gave him the same medicines as I have stated above. Paying no attention to the weak state in which he found himself, he continued with his excesses, repeatedly arising from his bed, sitting by the hearth, or fireplace, which they use in their kitchens, eating beans and chili, and not minding the entreaties and appeals by which I tried to make him realize how serious his situation was, and how imminent his danger of death. I had the honor of visiting him with the most Rev. Father Fray Antonio Jayme, and we found him by the above-mentioned hearth, on the damp floor (as all these houses are) eating entrails, or tripe, fried in the embers, as is the inveterate habit of all of them (the soldiers). This immoderation, and those above mentioned, caused his death on the twenty-fourth of December of last year.

Since then I have observed two patients with pleurisy, one of twenty-four years of age, and a girl with dysentery, three years old; all these now enjoy perfect health. Maria Dolores Cantua, in consequence of a difficult delivery and of a hard deposit formed in the abdominal viscera, died after twelve days from secondary effects of the parturition. During this period there have been a few wounds in the service, some serious and others which have been cured perfectly.

Your Excellency, in this place, in order to further the comfort and nurse the illnesses of the troops and neighbors of this Presidio, and of others, it would be good if we had a room[3] to help them. Hitherto, for lack of this and other equipment, many of them have had to be abandoned, to sleep in their homes in one bed with their wives, not having another, from which results spreading of diseases and detriment to the Royal Service. Also the unmarried men in the Presidio are left by themselves in the hands of their own kind. All this I call to the attention of the kindness of your Excellency that you may make disposition according to your superior pleasure.

Having gone out by order of the provisional commandant, Don José Antonio de la Guerra y Noriega, to help the Reverend Fathers in the mission of La Soledad, at the request of said Fathers, I investigated and observed among their neophytes syphilis, pleurisy, inflammatory fevers, and a climate foggy and windy in the extreme. In the mission of San Antonio, under the right Reverend Father Marcelino Sipres, I observed tuberculosis in its different stages, and also syphilis. In San Juan Miguel, where I stayed two days at the request of the Right Reverend Father Fray Juan Martinez, I observed dysentery; and according to the report of that clergyman, who with real interest asked me for help for his neophytes, I know that this illness is still in progress. The climate of this mission is the same as that of San Antonio, for both are subject to seasonal extremes of heat and cold.

In the mission of San Luis (Obispo), at the request of the Reverend Father Fray Luis Martinez, in a hospital which he has for his neophytes, in which I found about thirty patients, the greater part being women, I found tuberculosis and syphilis in the highest degree, and the Father informed me there were many more who suffered of the same disease. Nevertheless, I did my best during the ten days I was there. In the mission of San Carlos, which I have visited several times, I have seen several of its neophytes, the majority of whom had scrofula. On the way to San Francisco to treat the Commandant of that Presidio, in the mission Dolores I found much scrofula, syphilis, and a moderate climate. In the mission of San Juan Bautista (there were) syphilis, some tuberculosis and a windy, cold and foggy climate.

The causes of these diseases are: impure relations on an excessive scale, the great filthiness of their bodies and villages, direct and indirect contact, the sick sleeping with the healthy ones, the custom of frequently exchanging clothes, the loss of sleep during their games and dances, in which games and dances they all sing, reinforcing by movements (of their bodies) the organs of respiration; the depraved use of a sweat-house (temescal), made in the center of earth, around the circumference of which can lie at least twelve [persons] who enter by a little door and force themselves to sweat by a fire. Since these sweat-houses are always located near a fountain or pool, they come out of the warmth and jump in the cold water. To these indiscretions, which I have seen, and others of which I have been told, are due the diseases mentioned, and in spite of the charitable zeal of the Reverend Fathers in taking me to their villages that I might apply to them some medicines, to such an extent reaches their barbarism that they prefer to believe others who tell them that the Father is killing them. Scorning this help (that of the priest and physician), they doctor themselves by washing their sores or wounds, and scarifying themselves with flints, even to the eyelids, whatever the sickness is, not to mention other atrocities which they perpetrate.

If it should be pleasing to your Excellency, in your great charity, that I may go to the other missions and the Presidios of the Channel [Santa Barbara] and San

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[2] The text here is ambiguous. *La segunda* and *la tercera* may refer to a list of diseases of which the first, syphilis, has already been discussed. However, no such list appears. On the other hand, they may refer to the "humid climate" and the "great cold" respectively. If this is true, a confusion appears to exist in Benites' mind with respect to cause and effect between these natural phenomena, and the diseases he associates with them. The translation is quite literal at this point.

[3] *Una sala.* A room or hall to serve as a small hospital or infirmary.

Diego to examine the diseases of their neophytes, which I will observe with all the thoroughness which is granted me by God our Lord, and if the mercy of His Majesty, and of your Excellency orders me to do this for the good of humanity, then in the fulfillment of my duty and for the honor of my profession I shall do it. May God our Lord preserve your Excellency for many years.

(Signed) José Benites.

* * *

TRANSMITTAL LETTER OF OFFICER BORBON, FISCAL OF THE ROYAL TREASURY

Benites' statement was forwarded to the Fiscal, or the officer in charge of the Treasury, who usually commented on such reports, and made recommendations concerning their disposition. The Fiscal wrote as follows:

Mexico City, April 27, 1805.

Your Excellency:

The Fiscal of the Royal Treasury states that the governor of New California is sending to this high court the account or report which was sent to him by the surgeon of the Presidio of Monterey, Don José Benites, concerning the different sicknesses which he has been able to observe during his stay there and which the inhabitants suffer most frequently, stating that it would be advantageous to establish a "sala" or hospital where the troops and neighbors of the Presidio and others might be treated for their ailments with somewhat greater facility.

The object of such reports should be no other than (to make it possible) to adopt the most favorable and practicable measures for the welfare of humanity, either by completely destroying the contagiousness of some diseases, which have become almost indigenous to those countries, or, if this is not possible, to adopt measures to check their spread. Both purposes conform to the spirit of the Royal Decree of the 8th of November, 1797, which undertakes as far as possible to relieve and alleviate the distress of the Indians of Old California, and in harmony with which it was also decided to send to New California a physician with an adequate stipend. It is the opinion of the Fiscal that in order to achieve, in so far as possible, such desirable ends your Excellency should order that this communication be forwarded to the Royal Medical Board.[4] This is in order that, having become acquainted in detail with the report of Benites, it may point out the measures and regulations which by virtue of its practical and scientific knowledge it deems most likely to yield a system adapted to the climate and other qualities of the country as described by the afore-mentioned surgeon, with the object that, in accordance with the nature of circumstances as they arise, he may be able to put it into practice and use it according to the knowledge his experience there has given him. A proclamation of the decision made by the above-mentioned Board should be sent him through the governor with a provision that if his affairs should permit him, he might go to visit the missions and the Presidios of San Diego and the Channel in order to secure information concerning the diseases which are most common there and the most convenient means for the relief of the inhabitants. He should continue to send annually the accounts and reports required by the superior decree of September 4, ultimo.

Although the critical and pressing condition of the exchequer does not permit at present the establishment of a room or hospital as proposed by Benites, the emergency seems to the Fiscal adequate to warrant that your Excellency be pleased to order that when the Royal Medical Board has prepared its report, it having been sworn to and recorded, the report of Benites, and this reply, if it merits the acceptance of your Excellency, should be forwarded to the Illustrious Diocesan (the Bishop of Sonora). Then, after he has informed himself of the matter he may adopt, for such a meritorious and necessary purpose, those measures dictated by his notable pastoral zeal for the welfare of humanity and the aid of his spiritual subjects; communicating his decision to the said governor for his information.

(Signed) Borbon.

* * *

COMMENT OF THE ROYAL MEDICAL BOARD

This reply was approved by Viceroy Iturrigaray on May 3, 1805, and the report of Benites passed on by the Royal Medical Board. The latter considered the matter and returned the following statement:

Mexico City, May 10, 1805.

The diseases to which Don José Benites refers and which have been observed at the Presidio of Monterey, as well as at various missions visited by order of your Excellency, are common to the whole country and are seen among the entire population, for they are of the type that are caused by the disorders of the people or simply by the changes of season. Nothing can be argued against the climate of those provinces where there exists an endemic or regional debility except with respect to nutritional excesses and irregularities, and hitherto climates have been considered healthy when bad water, the estuaries, and other various causes of bad health have not produced the corresponding effects such as diseases of filth and relapsing fevers of which Benites makes no mention; nor are the diseases very numerous, for in one mission he saw only dysentery and in the others syphilis in advanced stages, and of considerable frequency.

No method can be devised which can spare the inhabitants the diseases which they suffer since the latter are due to inevitable causes and voluntary indiscretions; to the first belong the extreme cold, the lack of shelter, the bad water, lack of vegetables, and badly prepared meats; to the others belong carnal promiscuity, the mingling with infected persons, and the natural slovenliness of a people as yet little civilized, and who, in case of sickness, despise rational medicines, and use only the empirical treatment dispensed by their national doctors, each of which has knowledge only through his own experience.

Not only in those remote provinces is this the case, but even in our own country, and home. In the latest epidemic of smallpox, which occurred in Tacubaya (Mexico) where (I) was sent as doctor by the Regent Guebara with a supply of medicines to help them, the sick went into the back country and up to the hills to avoid being treated, and would go only to a medicine woman at Escapuralco. The same thing happened at San Salvador El Verde near Puebla, where some malignant fevers were detected and the commissioner, Don Ciriaco Carbajal, agreed with this Board in sending a physician to cure the sick, who, as soon as they learned that the professor had arrived, would hide themselves or deny their existence. This being understood, what can be expected of the inhabitants of California when those who are more enlightened resist rational treatment? The means of relieving the former could be administered by Benites, although not with all the breadth and skill of a professor of medicine, but the difficulty is that they may not follow his rules and that the salutary measures for their relief may be rendered useless.

There is no doubt that the establishment of an infirmary, into which the patients might be gathered, would facilitate their normal convalescence and be of the greatest assistance to Benites, but in addition to the difficulty pointed out by the Fiscal concerning its construction there is that of being able to get hold of the sick persons on account of the aversion they hold to such asylums. And, furthermore, there is the matter of accessory expenses such as arise in hospitals in connection with the administration of medicines and the care of the convalescents. If, actually, these obstacles could be overcome the establishment of an infirmary would be an advantage and help to those people, and it would be possible to alleviate principally syphilis, which, neglected and unattended, spreading by all the means of which it is capable, raises havoc with whole populations.

Understanding these things, your Excellency will adopt those measures which seem to your judgment best suited to the situation.

(Signed) José Vicuna, Muro.

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[4] *Real Tribunal del Protomedicato.* Literally, Royal Board of King's Physicians. An advisory committee consisting of physicians of the highest professional standing.

CONVERSATIONAL GEMS OF DR. J. P. WIDNEY*

Founder of the Los Angeles County Medical Association: At Age of Ninety-Five Still Active in Literary and Church Work

It is not enough to read a good book—reread it and grow up with it.

A good book should be a friend—not a chance acquaintance.

Little Timothy ought to yield a good crop—he's been sown in good soil.

The danger to a republic comes when men begin to sink their patriotism in their personal interests and their prejudices.

The moment a man admits the working of the law of cause and effect he is not an atheist.

"Cut your coat according to your cloth." You cannot make a frock coat out of a jacket.

Do your duty faithfully and your reputation will take care of itself.

"It is the unexpected that happens." Guard against the thing that never happens.

Let your horizon line be broader than self.

French is an eye-language. It is a nimble language.

Don't throw away your bread because you can't have butter on it.

If you would live, have something to live for; a man does not die until his work is done.

It takes a warm heart to win warm friends.

Truth may be so told as to become a lie.

In music, the sharps have pathos and majesty—the flats are smooth and mellow, but commonplace.

(To be continued)

CLINICAL NOTES AND CASE REPORTS

UNUSUAL CASE OF FIBROMYOMA UTERI

By STANLEY E. COFFEY, M.D.
AND
ERMANELL C. COFFEY, M.D.
Orland

A SURVEY of the literature anent fibroids in general seems to indicate a pretty fair agreement that the incidence of these tumors in girls under the age of twenty is to be considered a rarity. It is with this idea in mind that we submit herewith the following case report, interesting, on the one hand, from the standpoint of the patient's age and, on the other, from the standpoint of differential diagnosis in this particular case.

Anspach[1] quotes that in forty-two cases, reported by Laudau and occurring between the age of twenty and thirty years, only two of the patients were twenty years old. C. C. Norris[2] quotes the statistics of Frank, Kelly and Cullen, McDonald and himself, comprising 3,091 cases, wherein it is shown that only 13.7 per cent of all cases occurred in the decade between twenty and thirty years, and that the youngest patient was twenty years of age. Lynch[3] relates that Pick, Anspach and himself have found them in new-born children, and that Gusserow and Tillaux described the tumors in girls of ten, fourteen, sixteen: three at the age of eighteen, and eight at nineteen years. Yet, in his own series of 683 operative cases, no patient was under the age of twenty years. Hence, it would appear that this condition existing in a girl of eighteen years is of sufficient interest to warrant reporting.

REPORT OF CASE

On February 7, 1936, we were called to attend Miss F. A., aet. eighteen, who had been ill for ten days prior to this visit.

Chief Complaint.—Bleeding of a menorrhagic type for ten days.

Personal History.—In August, 1936, the patient had been exposed to pregnancy. Two weeks later she developed a discharge and reported to a physician, who made a diagnosis of trichomonas vaginalis and for that successfully treated her. There was no further history of discharge of any kind. Menstrual periods remained regular and of usual duration. No intermenstrual bleeding. No further interesting history appears until late in December, when the patient noted movements in her pelvis and lower abdomen, had a short period of nausea without vomiting, and a mild frequency of urination. This disappeared in about two weeks. Late in January she noted a swelling in her lower abdomen in which she claimed she could feel movements. These she described as a light tapping sensation. Periods still normal. No further developments occurred until the onset of her chief complaint.

Family History.—M. d. eighteen years ago, six days after the patient was born, from postpartum eclampsia, as near as can be determined. F. l. and w., German peasant stock, aet. forty-eight. Only suggestive family history is that of maternal aunt, l. and w., operated twice for uterine fibromata. One half-sister, l. and w., aet. thirteen.

Examination.—Girl of stated age, in bed, with marked evidence of secondary anemia, in no apparent pain, but with profuse bleeding from uterus. Aside from mild acceleration of pulse to 110, and paling of conjunctivæ, positive physical findings were confined to the abdomen and pelvis. There appeared to be a definite mass, directly in the midline, which on palpation was round and smooth, but rather harder than the pregnant uterus. In size it was comparable to the head of about a five- to six-month fetus. There was no evidence of any other tumor masses. Vaginal examination revealed a hard mass in the posterior fornyx, rather harder than the pregnant uterus and without its usual doughy consistency. Visual examination with the speculum was impossible under the local conditions. No movements could be palpated. There was a marked bruit, but no evidence of fetal heart sounds.

Diagnosis.—Incomplete five- to six-month miscarriage; unruptured ectopic pregnancy; cystic ovary; dermoid cyst; atypical intramural fibroid.

Treatment.—Usual expectant treatment for incomplete abortion, *i. e.*, fluid extract of ergot in dram doses, six such doses. Bleeding was interrupted, but not entirely stopped. Uterus failed to empty its contents.

After forty-eight hours of observation, it was decided to intervene surgically. The patient was accordingly transferred to the hospital and prepared for both dilatation and curettage and laparotomy. Blood count revealed a relative leukocytosis of 10,500; red blood cells, 2,950,000; hemoglobin, 55 Talquist. General preoperative condition was fair.

The cervix appeared nulliparous, and almost entirely obliterated along the posterior wall by a large, round, smooth mass. The sound was directed anteriorly by the same mass, as was the dilator. Gentle curettement resulted in small amounts of endometrium, curiously similar to that found in ectopic pregnancy. Practically no bleeding accompanied the curettage.

Immediately following this exploration, a laparotomy was performed through a midline incision. The uterus was found to be well into the abdomen. The tubes and ovaries were negative, except for a slight degree of edema of the tubes. The anterior wall of the uterus was negative, but the posterior wall was found to be involved in a relatively huge tumor mass extending from the internal cervical os to within a centimeter of the cornua. An attempt was made at myectomy, but the remaining wall was so thin and friable that the more radical supravaginal hysterectomy was performed, leaving the ovaries and tubes *in situ*. Closure was by the usual method. The patient left the table in fair condition.

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* Compiled by Rebecca Davis Macartney.
Previous excerpts from the Macartney compilation were printed in the July issue (page 61), August issue (page 171), and September issue (page 278).

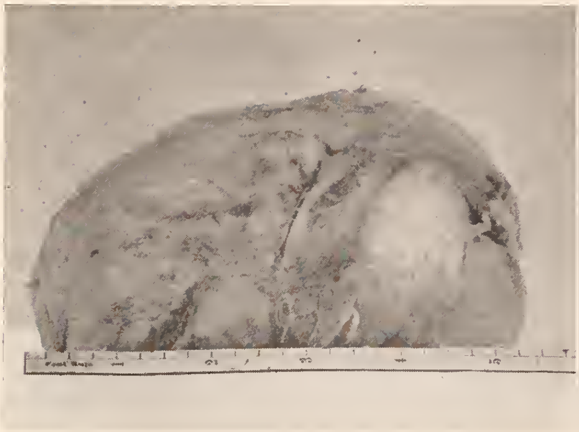

Fig. 1.—Endometrial surface, showing size of tumor.

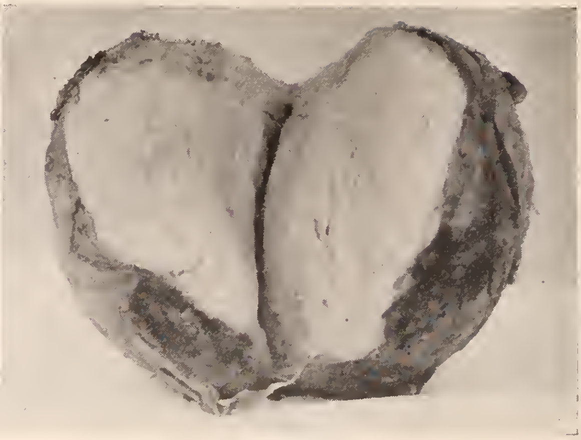

Fig. 2.—Cut section, showing extreme thinness of endometrial covering.

Postoperative course has been uneventful, except for three days of a pyelitic fever, associated with 70 white blood cells to the field in the catheterized specimen. This responded well to therapy, and the patient is now doing exceptionally well.

COMMENT

The accompanying figure amply illustrates the size and type of tumor removed. In consistency it is for the most part a fibroma, with a small amount of muscular tissue. The endometrium over the tumor was thinned out to almost tissue-paper thickness, but otherwise was entirely normal grossly. No microscopic section was done. Postoperative diagnosis: Fibromyoma uteri with hemorrhage; weight, 60 ounces.

1. This is one of those rare cases of fibromyoma uteri occurring in an individual less than twenty years of age.
2. It is also one in which the differential diagnosis between pregnancy and other tumors was difficult, it not impossible, at the time when first seen.
3. This type of tumor can develop with most amazing speed. Check-up of the patient's prior record reveals that not the faintest semblance of a tumor existed in August, 1936.

402 Walker Street.

REFERENCES

1. Anspach, B. M.: Gynecology, pp. 292 *et seq.*, 1924.

2. Norris, C. C.: Harper's Medical Monographs, pp. 112 *et seq.*, 1930.

3. Lynch, F. W.: Gynecology and Obstetrics. C. H. Davis, Chap. XII, Vol. 2.

ACRIFLAVINE AND LIVER DAMAGE WITH A REPORT OF A FATALITY ASSOCIATED WITH ITS USE

By O. C. Marshall, M.D.
Watsonville

Relatively little is known concerning the effect of some of the commonly used urinary antiseptics upon certain organs of the body, especially the liver. It is only in the rare case coming to necropsy wherein urinary antiseptics have been extensively used, and in experimental work upon certain animals, that their action can be studied. The purpose of this report is to summarize the available material in medical literature concerning acriflavine and its effects on the liver with a report of a case terminating fatally, evidently from its use. Further work is being done in the pathology department of Stanford Medical School upon the interesting effects of acriflavine upon the liver.

Acriflavine is one of a class of dyes used as a urinary antiseptic. It is most often prescribed as neutral acriflavine for systemic use and[1] recommended as enteric coated tablets of one-half grain each from three to eight tablets daily (96 to 256 milligrams). Also it is available for intravenous usage in doses of 100 to 500 milligrams, recommended to be dissolved in 20 to 50 cubic centimeters of normal saline and given daily for three days, and then every three to four days. Locally it is used commonly for urethral irrigations.

The action of living tissue indicates it to be a toxic dye. It readily stains the skin, such stain being removed with difficulty, and Heathcote and Urquhart[2] found that heart muscle absorbed and retained it in spite of prolonged perfusion with Ringers' solution. It was found to be depressing to certain tissues, a 1:1,000,000 solution depressing the heart, a 1:25,000 solution depressing intestinal muscle, and a 1:20,000 solution depressing skeletal muscle. Weaker solutions produced some stimulation of intestinal and skeletal musculature. The same investigators reported favorable bactericidal action on staphylococci, but found certain strains of gonococci quite resistant to acriflavine. Gilbrandsen[3] found the minimum fatal dose for monkeys to be about 30 milligrams per kilogram, body weight, and it appeared to kill by depressing the heart.

Heathcote and Urquhart[2] made quite extensive studies upon the action of acriflavine upon dogs, using various-sized doses. They used the drug intravenously and intramuscularly and found: (1) a dose of 50 milligrams per kilo killed at once; (2) sublethal doses of 25 milligrams per kilo at two-day intervals caused death in two to four doses; and (3) repeated smaller doses (5 to 12 milligrams per kilo) by intravenous or intramuscular injections at two-day intervals caused death or produced serious liver damage within fifteen to sixty days.

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[1] "Catalog of Specialties" (Abbott).

[2] Heathcote, R. St. A., and Urquhart, A. L.: Pharmacological and Toxicological Actions of Acriflavine, Pharmacol. and Exper. Therap., 38:145-160 (Feb.), 1930.

[3] Gilbrandsen: Proc., Roy. Soc. B, 90:136, 1919.

In the case of sudden death by larger doses, the cause was apparently cardiac depression, and in those dying after a delayed period the cause was due to liver injury. Necropsy findings upon those dying within the first week were practically a uniform cloudy swelling of the liver parenchyma and kidney epithelium. Those found from seven to twenty-one days after the first dose of acriflavine showed, in addition to cloudy swelling, an atrophy of the liver parenchyma and kidney epithelium, with some focal necrosis and pigmentation of the spleen. Those dying or destroyed in the interval from the twenty-first to the sixtieth day showed, in addition to the atrophy of the liver and kidney cells, a uniformly common focal necrosis situated chiefly around the central veins of the liver lobules and a congestion of the liver sinuses. The kidney showed a tubular atrophy. The marked pigmentation of the spleen indicated destruction of erythrocytes. The intramuscular sites where injection of the drug was given showed abscess formation.

One feature of the animals surviving sufficiently long was the great degree of emaciation attributed to liver injury.

McKelvey Bell[4] reported its use on persons by intravenous use and by enteroclysis. He considered it effective for many acute infections if used for one or two injections of a one-half per cent neutral acriflavine in 50 cubic centimeters volume at weekly intervals. He often noted alarming symptoms from it and warned against its frequent use.

Murray[5] reported its application in 118 cases, mainly of gonorrhea in the British troops. He used five cubic centimeters of a two per cent solution (100 milligrams) twice weekly, ranging from five to twenty-six doses intravenously. He noted toxic symptoms, and attributed one death to its use as showing an acute yellow atrophy of the liver.

The toxic symptoms are apparently divided into immediate and delayed symptoms. Bell reported complaints of transient fainting, vomiting, palpitation of heart, and two cases of mild shock. Old people complained of several days of weakness, lassitude, and depression following a second dose. Women tolerated the dosage poorly. The people who received four to five injections appeared to develop a gastritis with epigastric pains, nausea, and albuminuria.

Murray noted marked delayed actions appearing after a lapse of eight or more weeks, wherein 11 per cent of all cases receiving acriflavine (doses of five cubic centimeters of a two per cent solution) developed a jaundice against an average of 32 per cent in the untreated British troops. There was apparently no relationship between the number of doses administered and the occurrence of jaundice. Bell also noted a cardiac irritability developing about the fifteenth day. The fatal case reported by Murray presented similar but more marked symptoms than the others suffering from jaundice and, in addition to the icterus, showed loss of appetite and vomiting, slight pyrexia, bile-stained urine, paler stools, and tender liver at the costal margin. In the majority of cases the jaundice disappeared in ten days, and in a majority of cases the men recovered in thirty days. In the patient who died twenty days after hospital admission, diagnosis was acute yellow atrophy of the liver. This patient showed a leukopenia (1,400).

REPORT OF CASE

F. M., Age twenty-four years. American. Bank clerk.

Past History.—Never had had any severe infections; only a mild specific urethral infection in 1927, which responded well to treatment, but which appeared to have become aggravated in October before the use of acriflavine. Past average weight was about 205 pounds (90½ kilos).

Present Illness.—Gave a history of taking six acriflavine tablets daily (192 milligrams) from October 25 to December 22, or a total dose of about 11.1 grams. Early in November he began having periods of malaise, and about the middle of the month developed stabbing epigastric pains, with loss of appetite. Weight loss of 14 to 17 pounds during December, and about the same during the illness in January. During December he became quite weak, and developed marked tenderness in the liver with a constant epigastric distress. About January 6 he became markedly lethargic, associated with insomnia, which persisted until two days before death, when he passed into coma and expired.

Physical Examination.—When first seen on January 8 he was lethargic, and movement of body caused abdominal pain. Jarring over the liver was quite painful. Temperature was normal, pulse 64. On January 9 he developed a jaundice which became increasingly worse until death on January 20. The urine progressively became darker and the stools lighter. Temperature became elevated on January 15 and reached 104.2 finally. Had some vomiting during illness. Abdomen became much distended on the 19th with an anuria. Pulse became increasingly fast and reached 140.

Laboratory Examination.—Urine contained albumin two plus, much bile and, apparently cystine crystals. Widal was negative. Blood count of 6,000 white blood cells.

Clinical Diagnosis.—Acute yellow atrophy of liver.

Autopsy Report.— (Half-hour after death.) Moderate jaundice, with distended tympanitic abdomen present. No edema noted. The abdomen contained about one-half to one quart of dark yellow fluid. The jejunum and duodenum were sprinkled with many hemorrhagic spots the size of pin-heads or larger. The liver was firm in consistency and was decreased about one-third in size. The left lobe and the central portions were more involved than the right. On section the liver showed many regularly distributed nodules or granules on a yellow-green surface. The spleen was moderate-sized and stained a yellow green. The kidneys were moderately enlarged and bile-stained. The heart was enlarged and flabby.

Histologic Examination.—Spleen: Intense congestion of the sinusoids. In places are focal areas of necrosis, in which are rather numerous mononuclear cells, many red cells, and polymorphonuclear leukocytes.

Liver: In large, poorly circumscribed areas corresponding in position to the central parts of the lobules, many liver cells are swollen to several times the normal size, and the cytoplasm of these cells contain many vacuoles, but the nuclei of most cells are intact. Surrounding these cell groups there is a moderate amount of cellular fibrosis tissue, which in places extends between degenerating cells, and also extends into groups of otherwise normal appearing cells. There is a moderate irregular round cell and polymorphonuclear leukocytic infiltration of the fibrous tissue, which also contains large phagocytes filled with brown granular pigment. There are also a moderate number of proliferating bile ducts.

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[4] Bell, McKelvey: M. J. and Rec., No. 5, Vol. 120, p. 437, 1934.

[5] Murray, D. H.: Acriflavine: Its Use by Intravenous Injection in Treatment of Gonorrhea, J. Roy. Army M. Corps, 54:19-27 (Jan. 30), 1930.

Kidney: Slight congestion and cloudy swelling. The glomerular tufts are normal, though some capsular spaces contain granular material. Many tubules contain small hyaline casts.

Diagnosis.—Cirrhosis of liver, subacute; splenitis, subacute.

COMMENT

This case apparently harmonizes with the clinical effects of acriflavine upon the liver as reported in the literature. Apparently there is an accumulation of the dye in the liver cells which may even produce a progressive injury to the liver parenchyma extending several months after the drug is discontinued. The action appears to be uniform in type, but variable in amount. There must be a large number of cases where injury was present without symptoms severe enough to attract clinical attention. It makes necessary a more critical examination of patients for liver injury, especially those receiving drugs similar to acriflavine in action.

IN CONCLUSION

1. The use of acriflavine systemically and continuously is attendant with dangers.
2. The drug is apparently readily absorbed from the intestinal tract and is retained by the liver cells for a considerable period of time.
3. Acriflavine exerts a decided immediate toxic action on the heart, and a delayed toxic reaction on the liver.
4. It produces a secondary loss of weight due to liver injury.
5. It causes destruction of erythrocytes and a leukopenia.
6. Experimental work is needed on similar drugs as related to liver injury.
7. The fatal case here reported indicates the desirability of enjoining caution on the indiscriminate use of acriflavine.

Register Building.

A SIMPLE ABDOMINAL CUP FOR CONTROLLING CYSTOTOMY DRAINAGE

By Joseph E. Tillotson, M.D.
Woodland

Cystotomy wounds present practical and esthetic features that invariably require much attention on the part of the patient and all who have to do with their care. The writer has improvised a rather simple abdominal cup which eliminates many and minimizes other unfavorable features associated with a cystotomy.

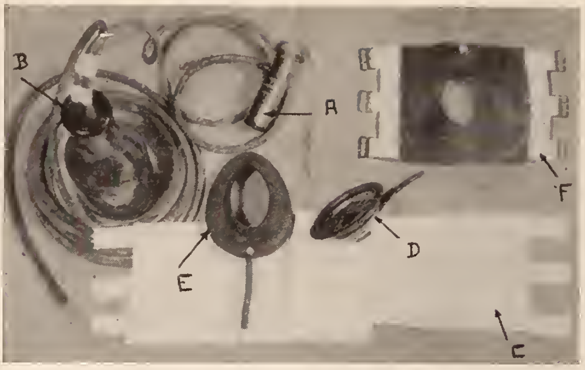

Fig. 1.—Working apparatus, illustrating component parts. A, running-water aspirator; B, bottle with rubber tubing for collecting urine; C, muslin abdominal binder; D, tin cups and copper tubing soldered together; E, pneumatic rubber rim, commonly used on conventional anesthetic inhalers; F, rubber mat, with buckles for attachment to abdominal binder.

The working apparatus, illustrated in Figure 1, comprises the following: A is a running-water aspirator. This is an economic and simple type, attachable to any shaped water faucet. Any suction apparatus, whether running-water type in design or motor-driven, will serve just as well. The bottle, B, is connected by tubing to the aspirator, and further connected by tubing to reach the patient; it collects urine and other discharge from the bladder. The abdominal part of the apparatus is formed of C, D, E, and F. C is an abdominal binder, made of muslin to the exact size of the patient. Two or three are made so that they may be washed and changed daily. D, or the main part of the cup, is made from tin cake-cups fitted with copper tubing and all soldered together. E is a pneumatic rubber rim, commonly used on conventional anesthetic inhalers. F is a rubber mat that goes over the metal cup when the latter is encircled by the pneumatic rim and fitted with buckles for attachment to the muslin abdominal binder. This particular mat was made from a piece of automobile tire inner-tubing and fitted with buckles and straps—a procedure easily done in the sewing department of the usual hospital.

Figure 2 shows the apparatus set up, ready to apply to the patient. Figure 3 shows it fitting on the abdomen. The patient, when his general condition permits, may get in and out of bed with the apparatus attached, working and maintaining complete dryness.

The cup may be applied immediately following a cystotomy operation. Once a day, or oftener, the cup is removed and the gauze changed. In the early stage of a prostate operation, for instance, there may be considerable blood, mucus, and sometimes pus, which may obstruct the cup to a degree, so that occasional cleansing is desirable. After a

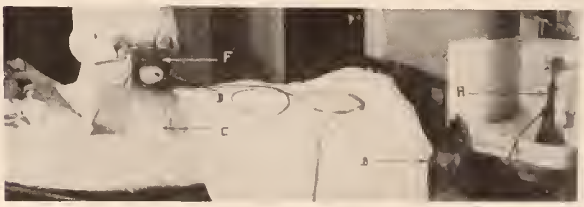

Fig. 2.—Apparatus set up ready to apply to patient. A, running-water aspirator attached to faucet; C, binder encircling body ready to be buckled to F, the rubber mat which steadies the cup, D. In the latter is a small fold of gauze which carries the urine from the surface of the abdomen near the wound to the upper compartment in the cup, where the fluid is aspirated away and collected in the bottle, B.

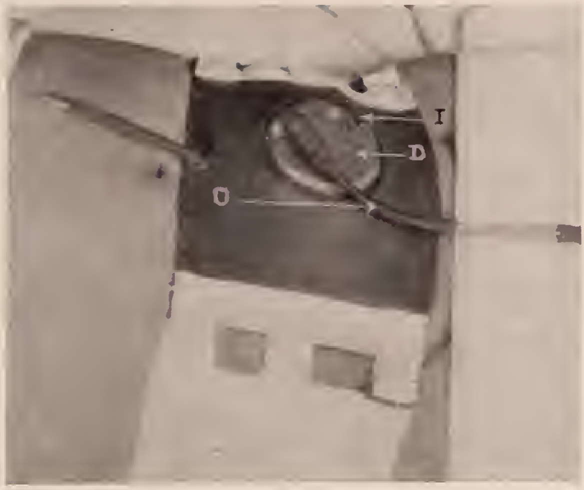

Fig. 3.—Apparatus fitted to abdomen. Air enters copper tubing at I; it leaves through the suction tube, O, carrying along collected urine from the cup, D; and the abdomen remains dry.

few days, however, it is surprising how promptly the urine becomes mucus and odor-free, and the wound also looks healthy and clean. Occasionally at the outset the skin beneath the pneumatic rubber rim becomes chafed and sometimes blistered. Puncture of the blisters and application of tincture of benzoin clear up the condition in a day or two, the skin heals promptly and rarely blisters again.

The suitability of this apparatus is illustrated in the following brief accounts of two of the writer's cases.

REPORT OF CASES

Case 1.—G. G. H., age sixty-seven. Admitted to Santa Monica Hospital on March 8, 1934. Obstructive prostate history of three years' standing; over period of three days before admission, hematuria; on admission, complete urinary retention not decompressible by urethral catheter on account of blood-clots; large prostate rectally; large suprapubic mass, involving also an inguinal hernia; increased blood urea and toxic. Repair of hernia separating bladder therefrom and cystotomy were performed; the bladder was full of old blood-clots, pus, and urine. A large caliber cystotomy tube was inserted and the cystotomy cup applied. Three days later the bladder discharge was free of blood, and toxicity of patient had subsided. Ten days after cystotomy the prostate was removed and the cystotomy cup applied. The patient returned home ten days later; there was still some cystotomy drainage, and use of the cystotomy cup was continued at home.

Twelve years before the present operation the patient had had a suprapubic cystotomy and prostate operation by a reputable surgeon. At this time syphon drainage was employed. The patient thus had an opportunity of experiencing two types of after-care for practically the same condition. He was ever enthusiastic in emphasizing the dryness and greater comfort in the use of the abdominal cup. To insure prompt and effective decompression, and as a safeguard against further accumulation of blood-clots in this case, a cystotomy tube of large caliber was used; this was easily adaptable to the cystotomy cup. Three days following the prostatectomy, when all tubes were out of the bladder, the cystotomy cup was still employed, maintaining complete dryness.

* * *

Case 2.—E. M., age sixty-four. Admitted to Sutter Hospital, Sacramento, June 16, 1935. Obstructive prostatic history of several years' standing; recent hematuria; on admission to the hospital, complete urinary retention not decompressible by urethral catheter due to blood-clots. Large prostate rectally, increased blood urea, and toxic. A cystotomy was done, at which time the bladder was found filled and distended with old and new blood-clots. Large cystotomy tube was inserted and the cystotomy cup applied. Within four days urine was blood-free and toxicity had subsided. Twelve days after cystotomy, prostate was removed. Cystotomy cup was applied right afterward, and two days later was still effective, when all tubes were removed from the bladder.

In this case, as in the former one, the cup was adaptable where a large cystotomy tube was desirable for prompt decompression and for a safeguard against reaccumulation of blood-clots in the bladder. It was also practicable to use effectively for dryness and cleanliness after all tubes were removed from the bladder, and later when the margins of the cystotomy wound were brought together.

SUMMARY

A simple abdominal cup for controlling cystotomy drainage has been illustrated. There are several advantages in the use of the cup:

1. The patient is kept dry—the usual discomfort of continuous large wet dressings is eliminated. The nervous strain and potential complications of large wet dressings are reduced.

2. The cup can be employed where no drain of any kind is in the bladder, or it may be employed where a cystotomy tube of large caliber is desirable for removing large blood-clots or other obstructive material.

3. It insures continuous gentle decompression with removal of urine and exudate, and this continuous action promotes cleanliness of the bladder and wound and protection against infection.

4. Toilsome and unpleasant nursing care is minimized. There is large economy in dressings.

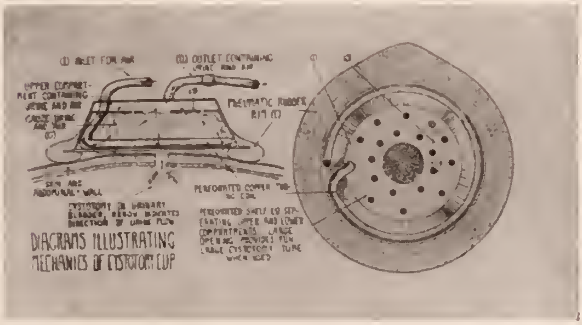
(I) INLET FOR AIR
(O) OUTLET CONTAINING URINE AND AIR
UPPER COMPARTMENT CONTAINING URINE AND AIR
GAUZE URINE AND AIR (G)
PNEUMATIC RUBBER RIM (E)
SKIN AND ABDOMINAL WALL
PERFORATED COPPER TUBING COIL
CYSTOTOMY IN URINARY BLADDER, ARROW INDICATES DIRECTION OF URINE FLOW
PERFORATED SHELF (S) SEPARATING UPPER AND LOWER COMPARTMENTS. LARGE OPENING PROVIDES FOR LARGE CYSTOTOMY TUBE WHEN USED
DIAGRAMS ILLUSTRATING MECHANICS OF CYSTOTOMY CUP

Fig. 4.—Diagram illustrating the mechanics of the metal cup.

In short, the principle involved is that of a current of air blowing continuously over the surface of the wound and carrying off the bladder discharge. The aspirator creates the current of air. When the latter operates, air flows in through the inlet, I; encircles through the copper coil; passing through the perforations in the coil, the air blows through the lightly packed gauze, G, which becomes saturated with the bladder discharge, and causes a flow of the urine, blood, etc., above the shelf, S, into the upper compartment in the cup, from which space the discharge is carried away through the outlet, O, to the collecting bottle. When the pneumatic rim, E, is inflated and wet, it adheres water-tightly to the skin of the abdomen, and there is required only slightly diminished interior pressure to maintain this fixation and this is without undue suction on the skin or bladder. There is no marked vacuum pressure here, for air is rushing in continuously through the inlet, I. The binder with the rubber mat merely acts as a steadying influence, and not as a major factor, maintaining the water-proof adherence of the pneumatic rim to the skin. One need not fear pressure necrosis to the bladder mucosa due to the latter pressing against an indwelling bladder tube, because the suction pressure is minimal. Moreover, a cystotomy tube may be removed, depending on individual circumstances, and the bladder discharge will be carried away effectively from the abdominal surface of the wound.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

CANCER OF THE FUNDUS UTERI

ETIOLOGY AND PATHOLOGY

Paul E. Hoffmann, M. D. (Stanford University School of Medicine, Department of Obstetrics and Gynecology, San Francisco).—Uterine cancer is found most often in women in the fifth decade, but may occur from the second to the eighth. An important etiologic factor is its association with fibromyoma. Stacy found 33.45 per cent of corpus cancer associated with fibromyoma in a series of 269 operated cases. In our clinic service we have seen eighty-four cancers of the fundus, and ten of these were associated with fibromyomas.

It is difficult to say just what the etiologic relationship between fibromyoma and cancer is. The interference of the fibromyoma with uterine drainage, and irritation from trauma by a submucous tumor have been considered etiologic factors. Some workers believe that there is a relation between carcinoma and adenomyoma of the uterus. Malignancy in the presence of hyperplasia of the endometrium is rarely seen. Tuberculosis has been observed in uterine carcinoma.

Benign overgrowths occur in the surface of the uterine mucosa as the result of chronic pyometra and following curettage when escharotics or styptics have been used. The regeneration of the surface epithelium may result in a proliferation of the epithelial cells, with partial or complete epidermization. Differentiation between this overgrowth and an early malignancy is very difficult. This epidermization, or leukoplakia, should always be regarded with suspicion and considered as a precancerous condition. In spite of extensive investigations, no one has yet definitely proved that chronic hypertrophy, hyperplastic changes, polyp formation, or chronic inflammatory conditions are responsible for the occurrence of cancer of the corpus uteri.

Pathology.—The anatomical forms may be divided into (1) diffuse and (2) circumscribed growths. The first may be an advanced stage of the second, but it is probable that certain diffuse tumors arise over a wide area. The earliest stages of the localized neoplasms appear as low thickenings in the endometrium, but definite outgrowth into the uterine cavity occurs early and forms polypoid or papillary projections. Certain tumors always remain distinctly papillary.

Bulky growths, which destroy the uterine cavity and invade the myometrium, are produced in the advanced stages. The cervical canal is rarely involved in corpus carcinoma, but groups of malignant cells may undermine the cervical mucosa. Because of the growth in the uterine cavity, a general enlargement of the uterus results. However, in some instances fibromyomas associated with the neoplasm account for the increased size. If the myometrium is intact, the prognosis is more favorable, and in some instances cures have followed simple curettage. If the growth is not arrested, it will eventually perforate the uterine wall and invade the bladder, rectum, or peritoneal cavity. The advanced stages of this malignancy are marked by excessive polypoid formation, ulceration, necrosis, and deposition of calcium.

Formerly all corpus cancers were considered as a single pathologic entity of the adenocarcinoma variety, but in the light of more recent studies the tumors have been classified into five histologic grades, or groups:

1. A superficial papillary adenoma, which runs a slow and rather benign course. Infiltration is absent. The cells are not very atypical.

2. Malignant adenoma, histologically a more malignant lesion characterized by greatly elongated alveoli, which are lined by several layers of cuboidal and cylindrical cells. The alveoli occur in groups separated by strands of stroma. The cell nuclei characteristically stain very deeply, but the cytoplasm is pale. Mitotic figures are common.

3. Adenocarcinoma, which differs from the above tumors in that invasion of the uterine wall occurs early. The neoplasm presents a glandular or papillary structure, but may be almost solid. The cells form multiple layers or solid columns, and the polarity of the cells is disturbed. In the solid portion the cells are even more atypical with marked variations in size, shape, and staining reactions. Invasion of the muscle and lymphatics occurs quite soon, and the tumor runs a malignant course. This type may occur in uterine polyps.

4. Grade 4 is a solid cellular adenocarcinoma. These tumors lose all semblance to any glandular arrangement, and replace myometrial tissue to the point of rupture. The cells are small, round or polyhedral, and stain deeply. Mitoses are numerous and there is complete loss of differentiation in the cells. Giant cells occur and occasionally the structure resembles lymphosarcoma.

5. True adeno-acanthoma, with squamous epithelium and pearl formation, is occasionally seen. In this type of neoplasm, squamous cells are the predominating tissue, and the tumor probably develops at the site of a leukoplakia. The squamous cells appear in foci in the alveolar lining, and may show evidence of hyaline degeneration.

A characteristic form of uterine carcinoma which is very malignant may originate in a diffuse adenomyomatosis. These tumors may occur deep in the uterine wall and extend to the adjacent tissues quite early. Various forms of adenocarcinoma, solid or alveolar types, are observed in these tumors.

SYMPTOMS AND DIAGNOSIS

Lawrence F. Eder, M. D. (1421 State Street, Santa Barbara).—The tendency to regard carcinoma of the fundus as a relatively benign and easily cured disease has done much to increase the number of deaths due to this malignant growth. The chance of cure of carcinoma of the fundus is similar to that of carcinoma of any other organ: the earlier it is discovered and treatment instituted, the higher the percentage of cures. And, as in other carcinomas, an early diagnosis is too rarely made. This is in part due to the fact that carcinoma of the fundus most frequently occurs at a time when menopausal disorders are present. The menstrual irregularities which are so common at that age frequently mask the presence of an early carcinoma of the fundus. The early warnings are tolerated by the patient in the belief that such manifestations are normal and to be expected of the menopause.

The difficulty of diagnosis is, likewise, increased by the presence of myomata of the uterus. Large series of cases of fundal carcinoma show that over 25 per cent are found in association with myomata, the presence of which alone would account for the symptoms.

The most common early symptom is abnormal vaginal bleeding. This occurs, in 100 per cent of the cases, some time during the progress of its growth. The bleeding is usually intermenstrual in type, beginning as a slight spotting, which becomes more marked in amount and more frequent as the area involved increases. Profuse bleeding rarely occurs until the later stages. If the malignancy begins during the menstrual life, the periods may be a little more profuse or prolonged, or there may be a slight spotting just before the onset of the expected flow. However, this confusing coincidence is not the rule, as carcinoma of the fundus occurs most frequently after the cessation of menstruation.

Occasionally the first symptom noticed is a thin, watery vaginal discharge. It is usually irritating, and may or may not be blood-streaked. If there is degeneration of the surface of the tumor, the discharge will be malodorous and may contain sloughing particles. This discharge may be ignored by the patient until it becomes more sanguinous in character.

Pain is rarely present until the later stages of the disease. There may be a slight sacral backache, or a feeling of pelvic discomfort which the patient is unable to describe in definite terms. After considerable growth of the tumor with metastases or parametrial involvement, there may be considerable lower abdominal and pelvic discomfort. However, during the early stages pain is not present and is of no diagnostic aid.

The personal history of the patient is rarely of diagnostic significance. The most common age of onset is during the fifth decade. Hereditary history of cancer is present in approximately 10 per cent of the cases. The parity of the patient is not of great importance, for over 25 per cent occur in nulliparous women. The duration of symptoms is misleading, for it varies from six months to two years, and depends on the type and grade of the malignancy.

Physical examination of the patient rarely reveals general signs, such as cachexia, loss of weight, and palpable masses, until the growth is advanced.

Pelvic examination: In the early period of growth of the tumor the uterus is usually normal in all characteristics. There will be no change in the size nor consistency of the uterus until the carcinoma has progressed for a time sufficient to cause a uniform enlargement and a barely appreciable softening or bogginess. Metastases occur relatively late, and palpable parametrial masses are found only in the advanced stages. Metastases to the regional lymph glands are rare.

As a diagnostic office procedure, the Clark test may occasionally be advantageously employed. The vagina and cervix are exposed with a speculum and cleansed with a mild antiseptic solution. An ordinary uterine sound is inserted into the uterine cavity and gently manipulated so as to contact the entire endometrial surface. If a friable, vascular carcinomatous area is contacted, there will be a small amount of bleeding around the sound or from the cervix after the sound is withdrawn. Care must be used not to perforate through a soft spongy area.

Ewing has been able to take fundal smears and to identify the cancer cells in this manner.

Blood serum reactions, such as Roffo's test, may be positive in the later stages of the disease, but have no great diagnostic certainty.

The symptoms of early carcinoma of the fundus, therefore, are not sufficiently alarming to the patient to demand medical opinion. The absence of local pain and frank hemorrhage belie the seriousness of the condition. Nor are the physical findings of sufficient distinction to merit a clear-cut diagnosis of early fundal cancer. However, the history of abnormal vaginal bleeding or discharge, especially within certain age limits, which cannot be explained on obvious grounds, should always be considered as strongly suspicious of carcinoma of the fundus.

These suspicions can be changed to an actual diagnosis only by a microscopic examination of the tissue. Therefore a diagnostic curettage must be done in all suspected cases. The curettage must be thorough in order that a small area of malignancy will not be overlooked. Care must also be used in selecting the tissue which is to be examined. Curettage is undoubtedly a much abused procedure, but it is the only one by which a definite diagnosis can be made. For this reason a thorough curettage should be done before intrauterine radium is inserted for the treatment of myomata of the uterus in order that a coexisting carcinoma will not be overlooked.

The symptoms and physical findings of the more advanced stages greatly simplify the diagnosis. Diagnostic curettage should be done in these cases to determine the type and grade of malignancy.

PROGNOSIS AND TREATMENT*

Verne C. Hunt, M. D. (727 West Seventh Street, Los Angeles).—*Prognosis.* In general it may be stated that the prognosis of carcinoma of the uterine fundus is the most favorable of any of the malignant lesions except those of the skin. While there are many factors upon which the prognosis of cancer in general is dependent, most of them are particularly favorable in carcinoma of the uterine fundus. This is particularly true when such lesions are contrasted with primary malignant disease of the uterine cervix which occurs more than twice as frequently as carcinoma of the uterine fundus. While carcinoma of the uterine cervix, often far advanced before alarming symptoms occur, is an invasive lesion, tends to progress rapidly, often metastasizes early, and is usually of high-grade malignancy, the reverse in all particulars is usually true of carcinoma of the uterine fundus. Carcinoma in the latter situation usually, or often at least, is a localized lesion productive of menstrual irregularity or intermenstrual spotting of sufficient degree during the menstrual age, or productive of postmenopause bleeding sufficiently early in its course to lead to diagnostic curettage and microscopic examination of uterine scrapings. Inasmuch as carcinoma of the uterine fundus is not particularly invasive, progresses slowly, and does not tend to metastasize early, the diagnosis is most frequently made while the lesion is a localized one, as contrasted with the state of affairs in most instances when the diagnosis of malignant disease of the uterine cervix is made. Likewise, the degree of malignancy of carcinoma of the uterine fundus is low in a high percentage of cases, while the degree of malignancy in carcinoma of the uterine cervix usually is high. Some years ago, in a series of 455 cases of carcinoma of the uterus that I reviewed (which consisted of 186 cases of carcinoma of the uterine fundus and 269 cases of carcinoma of the uterine cervix), in which the lesions were graded according to their degree of malignancy, it was shown that 66 per cent of the cases of carcinoma of the fundus were of low-grade malignancy (Grades 1 and 2), and 33 per cent of the cases were of high-grade malignancy (Grades 3 and 4). Only 8.5 per cent of the cases of carcinoma of the uterine cervix were of low-grade malignancy Grades 1 and 2), while 91 per cent of the cases were of high-grade malignancy (Grades 3 and 4). In other words, from the standpoint only of the degree of malignancy based on cell differentiation, the prognosis should be much better in carcinoma of the fundus than in carcinoma of the uterine cervix. This is borne out in a report which I have previously published in which it was shown that only 18 per cent of the patients with carcinoma of the cervix who had been operated upon were living five years after operation, as compared with 64 per cent of the cases of carcinoma of the uterine fundus who were living five years after operation. Of the various factors that are concerned in the curability of carcinoma of the uterus, the degree of malignancy based on cellular differentiation is the most important. On account of the tendency for carcinoma of the uterine fundus to remain as a localized lesion, the operability of the disease in this situation is high and the prognosis is favorable, on the basis that the majority of cases show a high-degree of cellular differentiation and the more highly malignant lesions are in the minority.

Treatment.—While there are many factors concerned in menstrual irregularity, menorrhagia, intermenstrual spotting and other manifestations not entirely regular and in order, they should not be too readily explained on the basis of ovarian dysfunction or menopausal disturbances. A normal size uterus and the absence of a lesion of the cervix does not allow one to hastily infer that disease within the uterine fundus does not exist. It is, likewise, noteworthy that, because fibroids are readily palpable, one may not hastily assume that associated intra-uterine malignant disease does not exist, and that the apparently innocent fibroids provide sufficient cause for menstrual irregularity or postmenopause bleeding. I have previously stated elsewhere that fibromyomas of the uterus were associated in 30 per cent of the cases of carcinoma of the uterine fundus. Certainly, when any question of doubt exists it is imperative that one urge a diagnostic curettement and careful microscopic examination of the uterine scrapings.

Operability of carcinoma of the uterine fundus requires that the lesion is confined to the fundus, without invasion of the cervix or the broad ligaments, without fixation of the uterus, and the absence of demonstrable regional or remote metastases. In the truly operable cáses in the absence of associated disease, by virtue of which the excessive surgical risk precludes operation or by virtue of which the expected longevity is not great, total hysterectomy with removal of both tubes and ovaries provides excellent prospects of cure of the disease. Except in instances of considerable abdominal obesity or marked uterine prolapsus, under which circumstances vaginal hysterectomy may be readily accomplished, the operation of total abdominal hysterectomy is usually most advantageously employed within a mortality rate of 5 per cent. The question of infection associated with carcinoma of the uterus has caused the operation of total abdominal hysterectomy to be accompanied in the hands of many surgeons by a somewhat higher mortality rate than the same surgical procedure for benign disease of the uterus. It has frequently been observed, particularly in those cases in which carcinoma of the uterine fundus has developed in the postmenopause period, that a considerable pyometria coexists. A preliminary procedure of vaginal suture closure of the cervix in all cases of carcinoma of the fundus prevents contamination of the operative field through the escape of such infective material during the course of the surgical procedure of hysterectomy. Furthermore, the use of the cutting cautery in making the dissection down around the cervix and across the vaginal vault, in all cases of total abdominal hysterectomy for benign or malignant disease of the uterus, has served a most excellent purpose in minimizing, if not entirely eliminating, contamination from within and about the cervix.

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* Submitted September 20, 1935.

Some question justifiably exists whether or not both the ovaries should be removed in all cases coincident with total hysterectomy. In patients with early malignant disease some ovarian tissue may at times be preserved for one reason or another; however, as a general principle, the complete removal of both tubes and ovaries simultaneously with total hysterectomy assures the best prospects of cure. Offutt showed quite conclusively that some relationship exists between carcinoma of the body of the uterus and carcinoma of the ovaries. In 520 cases of adenocarcinoma of the body of the uterus there was associated carcinoma of the ovaries in 11.9 per cent. Unquestionably, the fallopian tubes provide a direct route for extension of malignant disease from within the uterus to the ovary. In fact, Offutt found carcinomatous cells in the lumen of the fallopian tube in several cases of carcinoma of the body of the uterus. Likewise, Sampson has presented convincing evidence that migration of cells takes place through the fallopian tubes from the uterus, and he demonstrated endometrial and carcinomatous cells in the ovary and peritoneal cavity that had originated in the uterus. Furthermore, when one or the other ovary is involved in malignant disease of the uterine fundus, bilaterality of ovarian involvement occurs sufficiently often that seldom may one be justified in preserving ovarian tissue when performing total hysterectomy for carcinoma of the uterine fundus.

The operation for carcinoma of the uterus that was introduced by the Viennese surgeon, Wertheim, and which bears his name, is one which is seldom justifiably instituted for carcinoma of the fundus of the uterus. The operation consists not only of total abdominal hysterectomy with the removal of both tubes and ovaries, but also wide excision of all pelvic gland-bearing structures, including those along the iliac vessels. Its need and usefulness at about the time of its introduction, particularly for carcinoma of the uterine cervix, was far greater than at the present day; for at that time the effectiveness of the physical agents was not great. The mortality rate of 15 to 20 per cent attending this extensive surgical procedure has hardly justified continued usefulness of the operation, for it is extremely doubtful that the percentage curability of cancer of the uterus has been increased, when the excessive mortality of the operation is taken into consideration.

The extensive usefulness of the physical agents in the treatment of carcinoma of the uterine cervix which has advanced beyond operability quite naturally presents the question of the status of radiotherapy in the treatment of carcinoma of the uterine fundus. From the preceding statements regarding prognosis it is quite apparent that carcinoma of the cervix, and carcinoma of the uterine fundus, differ materially one from the other, not only in their degree of malignancy, their progression and extension, but also in their accessibility. The operability of carcinoma of the uterine fundus is high, while the reverse is true of malignant disease of the cervix. Little, if any, controversy exists today regarding the merit of total hysterectomy for truly operable carcinoma of the body of the uterus in the absence of general contraindications, and there is little, if any, suggestion from any quarter that radiotherapy is a justifiable substitute for such surgical procedure. There is little to suggest anticipated improvement in the results of total hysterectomy through preoperative radiation of operable carcinoma of the body of the uterus. There, likewise, is little evidence to support the suggestion of postoperative radiation in those cases of carcinoma of the uterine fundus in which at operation the disease is found to be an entirely localized, non-invasive type of lesion. However, postoperative radiotherapy may justly receive favorable consideration as an adjunct to total hysterectomy, if at the time of operation the lesion has been proved to be one of high-grade malignancy, or is invasive, or in which there is irremovable regional glandular involvement. Also radiation may be decided upon as the sole method to be used in the presence of distinct contraindications to a surgical procedure by virtue of associated disease providing an unjustifiable surgical risk or a short life expectancy. Likewise, radiation has proved of considerable merit in the cases of inoperable carcinoma of the uterine fundus, seldom in the production of cure in advanced cases, but often productive of much palliation.

Doctor, Please Return Your Questionnaire.—The Scientific Research Division of the United States Public Health Service has been conducting a health survey in certain localities in California. These localities are: San Francisco Bay area, Vallejo, Napa, Chico, Jackson, Grass Valley, Bakersfield, and certain sections of Los Angeles.

The purpose of the survey is to ascertain the rate of illness sustained by individuals and the diagnoses given by the doctor as well as the number of days of illness of a given period.

Some 40,000 questionnaires were sent out with a frank return envelope. Of this number, some 30,000 have been returned. The doctors returning the questionnaire are given 25 cents for each report.

The Public Health Service is desirous of obtaining a 100 per cent return, because only by such return can full value of medical data be determined.

You are, therefore, urged to return whatever questionnaires have been sent you.

Insurance on Health Studied.—The San Francisco *Daily News* of September 9 printed the following item:

"All credit unions of San Francisco and the East Bay will consider a medical and hospital insurance plan for 40,000 California credit union members next Monday night at the Women's City Club, 1428 Alice Street, Oakland, it was announced today by Leo H. Shapiro, chairman of directors.

"Northern California committees studying a medical program to assure employees full medical and hospital services for the payment of a small monthly fee also will attend the conference. The plan would embrace 7,500 San Franciscans.

"Participating in the meeting will be State Senator Dan Williams of Sonora, chairman of the Legislative Committee on Health Insurance, and Dr. Philip King Brown, leader of the movement."

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6. Articles listed under the caption, "This Month's Topics," have been contributed by the Association's Secretary.

CALIFORNIA MEDICAL ASSOCIATION

EDWARD M. PALLETTE..President
HOWARD MORROW..President-Elect
FREDERICK C. WARNSHUIS..............Secretary-Treasurer

THIS MONTH'S TOPICS

ASSOCIATION ACTIVITIES

1. *Have You a Paper?*
2. *Automobile Driver's License.*
3. *Services Available to You at Association Headquarters.*
4. *Membership Resources and Assets.*
5. *Threatening Letters.*
6. *Constitution and By-Laws.*

PUBLIC RELATIONS DEPARTMENT

1. *"E" Men.*
2. *Economic Budgets.*
3. *Elevators Spread Contagion.*
4. *Lay Health Meetings.*
5. *November Elections.*
6. *Public Health Institutes.*
7. *Don't Sign!*
8. *A Suggestion Applicable to Your Community.*
9. *Proposed Legislation.*

* * *

ASSOCIATION ACTIVITIES

HAVE YOU A PAPER?

Last month, under the above caption, an invitation was extended to members to send in their names and subjects if they were willing to present a paper or demonstration before our county societies. The statement was made that frequently the headquarters office is appealed to for speakers for county society programs. A list of members is being compiled and will be kept for reference so that a selection can be sent to county secretaries and enable them to arrange scientific programs.

The response was not gratifying—only eight answers were received. Therefore, this request is being republished. If you are willing and will respond to an invitation from a neighboring county society to present a paper or clinical demonstration, will you please send in subject, brief synopsis, and length of your paper, together with your name, address, and telephone number?

County meetings are being resumed. Will *you* help in making these programs interesting, practical, and inducive to large attendance? You can by responding to this request. Won't you write today? Thanks a lot.

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AUTOMOBILE DRIVERS' LICENSE

During the month a four-hour conference was had with the department head of the Drivers' License Bureau of the State Traffic Division. The state official came in with his problems related to the physical and medical aspects involved in denying or revoking automobile drivers' license.

Several files were presented that included traffic and police reports, court records, and medical certificates of physical fitness. The wonder was that licensed physicians would append their names to such certifications that lay enforcement officers knew were not substantiated by present medical knowledge.

By way of illustration the following are examples of signed certificates, by members, in an endeavor to establish that the party involved was a safe driver and should have a license or should not have his license revoked:

(*a*) Epileptic, taking ten grains of sodium luminal a day.

(*b*) Diabetic, taking 80 units of insulin per day (had two accidents while in insulin shock).

(*c*) Diabetic, requiring 7,200 insulin units per month.

(*d*) Insomnia (?) taking ten grains of nembutal daily and a known alcoholic.

(*e*) Reported normal vision with correction, yet on recheck had 20-60 and 20-100's.

(*f*) Total color blind, certified as having normal vision, yet has record of running four red lights in two weeks.

(*g*) Epileptic; three accidents during seizure. Was certified as having no physical defects.

The department's problem, in an earnest endeavor to reduce the present high automobile death rate and to protect drivers on the highway from these incompetent operators of trucks and passenger cars, is a grave one. An earnest effort is being made to reduce the death toll on our streets and highways. Individual and legal rights are involved. Unwarranted medical certification must be eliminated. There can, there must be no evasion or condonement when medical certificates are signed.

Arrangements are now being perfected whereby shortly a secret medical board of nine referees will be appointed that will review and make recommendations when traffic records and accidents indicate that a medical certification does not warrant the statements contained in the original medical certificate. If you give false certificates you become a party to any ensuing accident, or even death, due to physical defects in the driver involved. The medical profession must do its part in reducing automobile accidents.

* * *

SERVICES AVAILABLE TO YOU AT ASSOCIATION HEADQUARTERS

The following services are available to members and are obtainable by application to the Association's offices:

1. Mailing-list of members and addressing envelopes. (A small charge is made to reimburse addressograph operator.)
2. Literature on medico-economics.
3. Bibliographies.
4. Reference library.
5. Answers to inquiries on medical, economic, health, and legislative subjects.
6. Ratings of schools and hospitals.
7. Time and place of state and national meetings.
8. License and registration requirements.
9. Medico-legal decisions.
10. Consulting specialists.
11. Approved sanitariums.
12. Postgraduate schools and courses.
13. New and nonofficial remedies.
14. Radio broadcasts (medical).
15. Governmental agencies and service.
16. Approved laboratories.
17. Collection agencies.
18. Locum tenens (not always).
19. Practice openings (not always).
20. Approved investment agencies.
21. Ethics and professional conduct.
22. State and national medical policies.
23. Training in medical specialties.
24. Medical libraries.
25. General professional information.

These are but some of the services obtainable by reason of your membership affiliation. Your inquiries are welcomed and will receive prompt replies.

MEMBERSHIP RESOURCES AND ASSETS

1. Advantages of regular scientific meetings and discussions, district meetings, annual state session, clinics, and social functions.
2. Individual betterment contributing to betterment of entire profession.
3. Affiliation with an organized unit which with other units form the state unit whose Council, officers, and committees are charged with the responsibility of promoting professional interests as well as being on guard to expose and defeat movements and issues that are subversive to the public's and the profession's welfare.
4. Central information bureau.
5. Official publication, California and Western Medicine.
6. Eligible for American Medical Association Fellowship.
7. Protection for your professional work.
8. Postgraduate opportunities.
9. Endorsement of individual standing by peers.
10. Association with fellow physicians.

* * *

THREATENING LETTERS

Sooner or later a physician in active practice will receive a threatening letter from a disgruntled patient or one who is seeking to evade payment for services received. The letter may be written by the patient or by an attorney who has solicited or been retained by his client. Veiled threats are made and a reply or a call is requested "to avoid resort to legal proceedings."

The recipient physician is quite liable to "blow up" and in the heat of anger commit his reactions in a letter or in an explosive interview with the complaining parties—all to his future detriment. Should the issue come to trial, the "answering letter" or a repetition of the heated interview will find its way in the testimony for jury consideration.

This advice is given: *Never answer or respond to any threatening letter.* Refer it to your insurance attorney, who knows better than you do how to answer the threat and protect your interests. It may be difficult to resist "blowing off," but discretion is better than the passing satisfaction obtained from "That's telling him," which may backfire to your damage when the day in court arrives.

Clamp down on the safety valve; refrain from writing or explaining; do not enter into a discussion or make comment. Consult your attorney and allow him to handle the entire matter for you. Resolve, never to answer or reply to a threatening letter; your attorney knows best how to handle the situation. Depend on him and you will have peace of mind.

* * *

CONSTITUTION AND BY-LAWS

In the August issue the Association's Constitution and By-Laws were reprinted. The several amendments adopted at recent annual sessions are incorporated in this reprinting. A sufficient number of special copies of our Constitution and By-Laws have been acquired, and a copy has been sent to each county society secretary for reference and preservation in county files.

Members are urged to preserve the August issue for their personal reference.

A Few Peeves, or Things We Can Do Without

1. Uninformed legislators.
2. Detail men for "not Council approved" medicinal preparations—ditto for electrotherapy equipment.
3. Citizens (?) who neglect to register and vote.
4. The unwilling-to-be-advised politician.
5. Trade journals that lift their reading matter from recognized medical publications profiteering on advertising income from questionable advertising.
6. Two-thirds of the advertising junk contained in each mail delivery.
7. Music during dinners and banquets which are arranged primarily for renewing acquaintanceship.
8. Middle of the road drivers and corner cutters.
9. Punch boards to raise funds.
10. Laymen who think they alone are competent to direct and provide medical services.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

"E" Men

President Sensenich of the Indiana State Medical Association recently wrote: "The medical profession without its journals, like a nation without a public press, would be uninformed, incoördinated, and helplessly inarticulate."

"The E-Men of Medicine, the editorial personnel of medical publications, are the directors of this transmission system." He then pays deserved tribute to the "E" men of Indiana.

We would go further and pay tribute that is deserved to all the "E-Men of Medicine" in this country. Because of their service, vision, fearlessness, and leadership, we would like to nominate for the "E-Men in Medicine" hall of fame: Bulson of Indiana, Taylor of Texas, Whalen of Illinois, Hammond and Donaldson of Pennsylvania, Meyerding of Minnesota, Shanklin of Indiana, and last, but not least, Phil Jones, Musgrave, and Kress of California. There are other "E" men, but their nominations are left for others. The names mentioned represent editors who for many years have crystallized opinions and policies that have clarified medicine's problems and ennobled the temple of medicine and the medical profession. They have been most influential in guiding the profession and creating safe, just and constructive movements. Every organizational member is indebted to the "E" men in medicine. That indebtedness should be acknowledged frequently and earnestly.

* * *

Economic Budgets

Comfort, luxury, pleasure, are human quests and weaknesses. Food, clothing, fuel, and shelter are basic needs. A fifth basic need, physical welfare and medical care, is passed into the discard by luxury expenditures. It is not until the emergency arrives and medical care becomes a necessity that most individuals realize that they have failed to make provision for it in their budget. Confronted with the need for medical care and having failed to provide for it, the individual calls upon the physician or society to assume the burden of his neglect and provide him with that which he should have prepared for ere expending reserves for luxuries. A human trait that has been condoned and, in great measure, abetted by governmental agencies.

That trait will continue and will grow unless economists, governmental agencies, and society initiate a movement to educate and impress the individual that the provision for medical care is his personal responsibility and obligation. Appropriation of funds for these educational movements will be a lesser drain upon the taxpayer and the community than would be the tremendous amount required to provide medical care by means of tax-raised funds.

American citizens need to be enlightened as to their personal responsibilities. You say, "Try and do it" and "utterly impossible in these times of governmental paternalism and spoils"—a defeatist attitude. Had such a position been assumed in the years past, we would still have the plagues of smallpox, diphtheria, typhoid, and tuberculosis, because when public education to eradicate these diseases was undertaken the task to do so seemed as hopeless and impossible as is the task of endeavoring today to commence to cause individuals to recognize that medical care is a basic need that should be met by the individual. We prefer to try and fail than not to start trying.

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† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

As to the need of trying, cogitate on these figures, imparting the luxury expenditures of the average family per year:

Automobile	$150.00
Tobacco	67.00
Gasoline	37.00
Candy	37.00
Movies and entertainment	35.00
Sodas, ice cream, and gum	34.00
Jewelry and furs	29.00
Liquor	25.00
Radios	16.00
Cosmetics	15.00

The average medical bill for the family, if it is paid, is $62 per year, but more is spent for tobacco. Twice as much is spent for candy than for hospitals. Twice as much is spent for cosmetics as for nursing. Luxuries exceed necessities and basic family needs.

Certain states and communities are balancing their budgets and reducing taxes. A light is dawning, and persons with annual incomes of $1,400 in this state, paying $1 per day in taxes, are beginning to demand a halt. Politicians and lawmakers will listen to that demand if we make it loud enough.

* * *

Elevators Spread Contagion

We have often wondered why health departments and officials have not devised a terse, arresting slogan to be placed in public elevators, to prevent spread of infection by coughing and sneezing.

Most everyone has some time or another ridden in an elevator and has been deluged with the spray of a sneeze or cough by a copassenger. Personally we have been tempted to speak our piece to the offending passenger and berate him or her for their infection-disseminating act. Signs are placed in other public conveyances. Elevators, especially in these days of tall buildings, carry thousands of passengers hourly, all confined within a small space. The cougher and sneezer always hits the bulls-eye with his spray.

An ordinance is suggested compelling building owners to place a neat attention-arresting warning sign in all public elevators. Someone can probably suggest a better warning than these: "If you must cough or sneeze, cover your face." "Prevent the spread of contagion by covering your face when you cough or sneeze." "Do not transmit your infection to fellow passengers by unprotected coughs and sneezes."

It is hoped that health officers will adopt this suggestion, which may aid in reducing nasal respiratory infections. Make elevators sanitary public conveyances.

* * *

Lay Health Meetings

A major activity of county medical societies is the education of the public upon the questions of private and public health. It is a fact that a lay person consults a cultist mainly because of lack of information and inability to discern the difference between scientific medicine and the pseudoscientific representations of cults. The average person, once informed, will discontinue consultation with a member of a cult. The many uninformed persons accounts for the fact that only about 50 per cent of the medical care required by the public is rendered by licensed physicians and surgeons. Hence education of the public is a major responsibility of our constituent units.

This educational program is not inspired by mercenary reasons. It is based on the centuries of service through which medicine has always exhibited its concern for the advancement of the health welfare of the public. Edgar A. Guest has expressed an ideal in:

> He has not sowed who gathers gold,
> Nor has he served whose life is told
> In selfish battles he has won
> Or deed or skill that he has done;
> But he has served who now and then
> Has helped along his fellow men.

Sponsorship of a program of lay health education requires no apology or explanation.

Chief interest is now centered in inspiring county societies to initiate a series of local health talks for the public. A committee should be placed in charge. The coöperation of lay organizations should be secured. Publicity should be obtained through the local press and by means of announcements in schools, churches, and in other meetings. Dates should be determined for a series of three to six meetings at intervals of two to four weeks. Assistance in obtaining speakers will be rendered by the state headquarters office. A little push, energy, and work will inaugurate the program in your county. Will you bring this about?

* * *

November Elections

Before the next issue reaches you the November national and state elections will have taken place. Our political interests are not pledged to any party or to party candidates. Our foremost interest is to bring about the exercising of every member's franchise right—to cause him to go to the polls and vote. Our next interest is to urge every member to become informed as to the ability and sincerity of every candidate and to know the purpose and necessity of every special measure or initiative and then to vote in accordance with his best beliefs and judgment. Every voter should aid in securing the election of the most capable candidates and the passing of sound legislation. Entering the voting booth in that spirit will result in the securance of dependable, truthworthy legislators and governmental officials.

Elections record the voice of the people. Record your voice by voting intelligently and advisedly.

* * *

Public Health Institutes

The San Diego Exposition closed its gates the night of September 9. By actual count on the last day, over 10,000 persons visited the Hall of Medical Science. Records reveal that the Hall of Medical Science attracted thousands of people. Its attendance records were exceeded only by the number who visited the Transportation Building. A detailed report on the Hall of Medical Science is being prepared by the committee and will be submitted in the near future.

Sponsorship and supervision of the Hall of Science by the San Diego County Medical Society and the California Medical Association was a major activity these past nine months in our Association's program of public health education and welfare.

We now enter upon our second major activity—the conducting of a series of Public Health Institutes in selected localities in our State with the assistance of county societies and auxiliaries.

The arrangements have been made to conduct Public Health Institutes in Monterey, October 7 to 10; Santa Barbara, October 22, 23, and 24; San Francisco, October 14 to 17. Our Association exhibits on heart, cancer, tuberculosis, diet, preventive medicine, maternal welfare, appendicitis, serology, medical education, smallpox, and plastic surgery will be supplemented by local exhibits from health departments, hospitals, clinics, dairy and food departments, dentistry, nursing and local welfare organizations. These institutes are open to the public. No admission is charged. A series of health talks are given. By these means visualized education on individual health welfare is imparted. Sound public opinion is created and public benefit ensured.

Other bookings will be made at the request of county societies. May it be suggested that your county society sponsor a Health Institute in your community?

* * *

Don't Sign!

1. Until you have read and understand all the clauses of a lease.
2. Until you have included a clause in the lease that in the event of your death your administrator has the option of terminating the lease on thirty-day notice.
3. A note until the maker has secured you as endorser against loss if payment is demanded from you.
4. A trial order unless you are certain that the order can be canceled without cost to you.
5. A petition until you know what the petition contemplates.

6. A certificate until you are possessed of facts to substantiate it.
7. A bond until you understand the liability you are assuming.
8. Don't sign a check for more than your deposit balance.
9. Don't sign a receipt until you have received that which you acknowledge as having received.
10. Don't sign a "power of attorney" unless you are fully informed as to the scope and extent of that power.

Foolish Dont's, some will say. Nevertheless, many an individual has paid dearly because he was careless in not heeding such simple "Dont's"

* * *

A Suggestion Applicable to Your Community

Officers of the Chicago Medical Society report a tremendous amount of interest and educational results in their window display in one of the large department stores in the loop district. The store management has placed one of its large display windows at the disposal of the county society. Each week some health subject is covered by this display, and facts about medical truths are visualized to the passing throng. Time and labor are required to build these exhibits. Members of the society under the guidance of a committee prepare these educational exhibits that daily carry their story to passing thousands. Some of our metropolitan societies will do well to undertake a similar activity. Even in the smaller communities a sympathetic merchant could be induced to proffer a display window for several weeks. Try it!

* * *

Proposed Legislation

It cannot be stressed sufficiently that members should refrain from expressing opinions or subscribing support in legislative proposals until such legislation has been reviewed by the Committee on Public Policy and Legislation and its recommendations have been received. Marked differences of opinions is capitalized by proponents of undesirable legislation. Such a situation should be avoided and can be avoided if members and county societies will conform to this recommendation.

Back of some legislative proposals hidden motives exist. Innocent they seem to be on first or outward appearances, but when analyzed they involve and supersede present satisfactory provisions. Upon application untoward and undesirable conditions are established that hasty approval failed to detect, and had they been known, or had all the ramifications been exposed, endorsement would not have been pronounced and opposition to enactment would have been made. Consequently the advice is repeated, refrain from endorsing and supporting proposed legislation until our Association's attitude is determined.

COMPONENT COUNTY MEDICAL SOCIETIES

SACRAMENTO COUNTY

The regular meeting of the Sacramento Society for Medical Improvement was held in the Auditorium, Twenty-ninth and L streets, on Tuesday evening, September 15, at 2:30 o'clock.

Dr. Edmund Butler of San Francisco was guest speaker, and his topic was *Injuries of the Chest and Abdomen That May Cause Early Death—Diagnosis and Treatment.*

Attention was called to the following resolution, passed at the July 14 meeting of the board of directors of the Sacramento Society for Medical Improvement:

WHEREAS, The By-Laws of the Constitution and By-Laws of the Sacramento Society for Medical Improvement as provided in Chapter VIII, Section VII (b), are as follows:

"Physicians shall not become or remain associated or identified with any corporation, organization, group or individual, medical or lay, except those approved by the Board of Directors of the Sacramento County Medical Society, resorting to or making use of direct advertising to the public for business of a medical or therapeutic nature, or having to do with the diagnosis, care or treatment of the sick or injured, the maintenance of health, or the prevention of disease"; and

WHEREAS, The Mutual Benevolent Health Society is an organization engaged in the practice of medicine; therefore

Resolved, The Board of Directors disapproves of this organization.

NORRIS R. JONES, *Secretary.*

⁂

SAN JOAQUIN COUNTY

The regular monthly meeting of the San Joaquin County Medical Society was held Thursday, September 3, in the Medico-Dental clubroom, at 8:15 p. m., President T. C. O'Connor presiding.

The regular meeting was preceded by the customary supper meeting at the Hotel Wolf at which ten members were present. The paper at the supper meeting was presented by Dr. H. J. Bolinger of Lodi, who talked on *Psychoanalysis From the Viewpoint of the General Practitioner.*

The petition of Dr. H. Rixford for membership in the San Joaquin County Medical Society being passed on favorably by the Admissions Committee, and there being no objection from the floor, he was declared a member. The petitions of Doctors D. Belts and R. A. Greenman were presented and referred to the Admissions Committee.

A representative of the P. T. and T. Co. and Miss Huxford of the Logan Business Bureau spoke on the advisability and cost of installing a physicians' exchange in Stockton.

A communication from George E. Katz, foreman of the San Joaquin County Grand Jury, concerning the adoption of the charter form of government for San Joaquin County, was read.

The paper of the evening was presented by Dr. Charles Mathé of San Francisco, who gave a talk, illustrated by many lantern slides, on *Diagnosis and Treatment of Obstructive Lesions of the Kidney.* After the conclusion of this paper he presented two reels of moving pictures taken on the sixth congress cruise of the Pan-American Medical Association to Rio de Janeiro in 1935. Both the paper and the moving pictures caused considerable discussion and questions from the floor.

There being no further business to come before the Society, the meeting was adjourned at 10:45 p. m. and refreshments were served.

G. H. ROHRBACHER, *Secretary.*

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SANTA BARBARA COUNTY

A special meeting of the Santa Barbara County Medical Society was held at the El Paseo, Monday, August 24.

Those present were: Santa Barbara Councilors Freidell, Gray, and Clark; Doctor Ullmann, state district councilor; and Doctor Eaton, secretary of the Council.

This meeting was celled at the request of a member of the Council to consider the propriety of appointing a committee to investigate the charges preferred against a physician, not a member of the society.

After discussion, a motion was made by Doctor Clark, seconded by Doctor Gray and unanimously carried, that any action in this matter is not properly any business of the Society.

Doctor Freidell suggested that some action be taken to require a response from the membership to the questionnaires recently forwarded.

A motion was made, seconded and carried, that Dr. Harold Kahn of Santa Maria be recommended for membership to the Society, provided a favorable report is received from the state secretary.

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The regular meeting of the Santa Barbara County Medical Society was held Monday evening, September 14, at Bissell Auditorium, President Gray presiding.

Dr. C. T. Roome gave a very interesting and instructive paper upon *Aseptic Meningitis*, which was discussed by Doctor Koefod. Doctor Roome also commented upon the local infant mortality rate, and emphasized the necessity of stating correctly the primary cause of death when completing death certificates.

Mr. Charles A. Son of Los Angeles gave a very instructive talk upon the *Problems of the Industrial Acci-*

dent Commission, urging closer coöperation by the profession with the Commission.

Mrs. Hunt, president of the Woman's Auxiliary, spoke concerning the *Public Health Institute*, to be held in Recreation Center the latter part of October, and which is being sponsored by this organization. As the Society desired to give financial aid to this project, a motion was made, seconded and carried, that each member of the Society be assessed one dollar.

President Gray announced that the Visiting Nurses' Association had established an hourly nursing service at very reasonable rates.

Doctor Robinson, chairman of the Insurance Committee, gave a most complete and comprehensive report of the activities of this committee, with their recommendations, which upon motion, duly carried, was accepted and ordered attached to these minutes.

Doctor Baird invited the Society to hold the October meeting in Santa Maria, which was accepted.

Doctor Freidell reported the proceedings of the Council meetings, and the Society confirmed the action of the Council, that a committee be appointed to investigate the merits of a malpractice suit.

Other committee chairmen had no reports.

William H. Eaton, *Secretary*.

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SOLANO COUNTY

The Solano County Medical Society held its first meeting after the summer recess, Dr. Joseph Tillotson of Woodland being the guest speaker. The meeting was well attended for the first meeting, and the subject, *Fractures and the Causes of Poor and Fibrous Union* was well received. During the discussion many interesting points on treatment were brought out. Dr. A. Lloyd Johnson, recently of Taft, was admitted to membership on a transfer from Kern County.

John W. Green, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (21)

Fresno County.—Earl H. Coleman, Harold John Cooper, Clarence D. Newel, Milton M. Schatz, Albert Hamlet Sweeney.

Los Angeles County.—J. E. Bergmann, Eugene F. Hoffman.

Monterey County.—Lawrence M. Knox, Arthur L. Wessels.

Napa County.—Stanley McClure Deakin.

San Bernardino County.—Edward Mahon.

San Diego County.—James Clarence Anders, Florence Olive Austin, Alfred Henry Byars, George Wilbur Getze, William Buster McGee.

San Luis Obispo.—Lowell Spafford McGraw.

Santa Clara County.—Albert R. Currlin.

Santa Cruz.—R. C. Alsberge, Edwin A. Coats.

Shasta County.—Bertram Lawrence Trelstad.

Transferred (3)

M. Elizabeth Jenkins, from Solano County to San Francisco County.

A. Johnson, Lloyd, from Kern County to Solano County.

Edwin Wilton Thomas, from San Joaquin County to Shasta County.

In Memoriam

Duffield, William. Died at Los Angeles, September 9, 1936, age 70. Graduate of the University of Pennsylvania School of Medicine, Philadelphia, 1893. Licensed in California in 1900. Doctor Duffield was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Pure white marble has replaced wooden monuments that formerly were in place. Amongst crosses are many "Stars of David" (Jewish).

OBITUARY

Shadworth Beasley

1876-1918

The inscription on a marble tombstone in the Meuse-Argonne cemetery reads, "Shadworth O. Beasley, Major, Medical Department, California, October 14, 1918, D.S.C." On the anniversary of his death it is fitting that we should pause and do homage to the memory of a real man, a fine physician, and a brave American, whose life was devoted to helping others and who made the supreme sacrifice while rendering aid to the wounded under fire near Cierges, France.

The record reads: "Major Beasley was killed in action October 14, 1918, about 8 a. m., on Hill 253, about two kilometers northwest of Cierges, France. He had just returned from the hospital to duty the day before, where he was under treatment for the grippe. Seeing a soldier fall into a shell hole after being struck by fragments of a high explosive shell, he left his shelter to go to the aid of the wounded man. While supervising the carrying of the wounded man back to the aid station, another high explosive shell burst directly on the aid party, mortally wounding Major Beasley in the right hip and abdomen. First aid was administered by the sergeant and litter carrier, but the Major was beyond medical aid, and died about ten minutes after being wounded. He remained conscious up to the moment of his death."

Previously, Major Beasley had a long and honorable career in the Philippine wars and later in Serbia. At the time of the World War he was assistant clinical professor of obstetrics and gynecology at Stanford University Medical School and member of the San Francisco County Medical Society. He went into the Army and overseas early, seeing much active service.

The citation under which Major Beasley was awarded a Distinguished Service Cross, reads as follows: "For extraordinary heroism in action near Petit Bordeau Woods, France, July 14-16, 1918. During the entire action, Major Beasley braved the danger of continuous shell fire by constantly searching for wounded and administering treatment."

There are many California boys resting in this beautiful place.

Recently, while motoring through Europe we stopped at the Meuse-Argonne cemetery and had the privilege of visiting "Shad's" grave and taking these photographs. Originally there were twenty-five thousand bodies in this beautiful place, but ten thousand have been returned to America. Many thousands more remain in various parts of France. When one contemplates this and reviews the world situation and observes the attitude toward us of some of our European friends, one cannot help asking "was it worth the sacrifice"?

HARRY E. ALDERSON, M. D.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

MRS. ANDREW J. THORNTON.............................President
MRS. ROBERT M. FURLONG...Editor and Chairman of Publicity

A. M. A. Convention Gleanings: Report by the President

Dear Auxiliary Members:

Thursday, May 9, was the day and 8 p. m. the hour toward which all my plans had been shaping for a fortnight. . . .

I reached Kansas City late Saturday night. The first person to greet me in the dining room Sunday morning was Mrs. Rogers N. Herbert, our national president.

Sunday afternoon, May 10, a tea honoring Mrs. Herbert was tendered the National Board by members of the Jackson County and the officers of the Wyandotte and Clay County auxiliaries. . . .

Baltimore Hotel, Kansas City, Missouri, was the official headquarters of the fourteenth annual convention of the Woman's Auxiliary to the American Medical Association, which convened from May 11 to 15. . . .

I think I gained most benefit from the deliberations of the National Board, since there was more opportunity for frank discussion of problems and policies in this smaller group than during the general sessions of the convention.

The problem of coördinating the work of local, state, and national bodies was much discussed. State presidents were urged to impress upon their officers the importance of coöperating with the National Auxiliary in two particulars: by sending their addresses to the corresponding national chairman, and by answering all correspondence promptly. Silence is baffling to a chairman trying to assemble data necessary to make her own records complete.

Mrs. James D. Lester, our energetic *Hygeia* chairman, was asked many difficult questions regarding *Hygeia* subscription rates. There seemed to be a general feeling that a larger number of subscriptions could be obtained through the efforts of the auxiliaries if a more definite price schedule were established. . . .

Perhaps this is the point to pass on a word of advice from National regarding organization work. It is this: that care should be taken to have sufficient enthusiasm and interest aroused before an auxiliary is formed so that a permanent organization will be assured.

The problems peculiar to the small auxiliary were discussed most sympathetically. The consensus of opinion was that these groups are asking too much of themselves. They justify themselves by being organized and ready for the opportunity to serve the cause of better public health and scientific medicine whenever it arises.

For a number of years the revision of the Constitution and By-Laws of the Woman's Auxiliary to the American Medical Association has been in progress. Since it embodied several changes in procedure which required intensive study before final action could be taken, it was referred to the Revision Committee for recommendation next year.

Mrs. Eben J. Carey, treasurer, reported the new accounting system a great improvement since it has simplified the work of local officers and provided them a permanent record of membership. The system is fully explained in the new Handbook, and I urge all county treasurers to familiarize themselves with it. Copies of the Handbook may be obtained from the chairman of supplies, Mrs. Lucius Cole, 1117 North Lathrop Avenue, River Forest, Illinois. The price is forty cents.

Mrs. William Hibbitts, historian, had prepared an excellent map in folder form. . . .

In concluding my report of the Monday sessions, I want to stress three ways to coöperate with the National this year:

First: By answering all communications promptly and fully.

Second: By keeping records of all *Hygeia* subscriptions secured.

Third: By carrying on Mrs. Long's three-point program, which follows:

1. The continuation of the Public Relations Educational Program through health programs, health institutes, and essay contests.
2. That auxiliaries continue coöperation with local Parent-Teacher groups in their health programs by advising periodic health examinations of school children in the office of the family physician in preference to mass clinics.
3. The promotion of *Hygeia* exhibits at county and state fairs, with Auxiliary members serving as hostesses and distributing American Medical Association literature.

The formal opening of the convention was at nine o'clock, May 12, in the Francis I room of the Hotel Baltimore. Forty-four board members, sixty-four delegates, and sixteen alternates responded to roll call.

I shall mention only a few highlights from the sessions of the convention, but strongly recommend that you read the reports of the state presidents when they are printed. They were stimulating and a revelation of the growth in knowledge and usefulness of our membership.

Mrs. Rogers N. Herbert, in her annual report declared the Auxiliary needs greater appreciation from the doctors and greater unity between county, state, and national bodies.

Mrs. Augustus Kech of Pennsylvania was named president-elect.

Now as to the part California played in the convention. Six women responded to roll call, one board member, and five delegates. California ranked third in membership with 1,080 paid-up members. We received honorable mention for the increase in number of subscriptions to *Hygeia* over the previous year. I was proud of the report that California stood first in number of new counties organized. We reported five and Mississippi four.

Your delegates were of service on convention committees. Mrs. W. H. Sargent, Mrs. James F. Percy, and Mrs. Andrew J. Thornton were named on the elections, the nominating and the credential committees, respectively.

Finally, I am happy to report that California will have two representatives on the National board next year. Mrs. Philip S. Doane was elected third vice-president, and to Mrs. James F. Percy were entrusted the difficult problems to which the Chairman of Revisions has fallen heir.

At the Tuesday, Wednesday, and Thursday luncheon hour we were instructed and entertained by three guest speakers: Dr. W. W. Bauer, director of public health for the American Medical Association; Dr. Perry Bromberg, professor of clinical urology, Vanderbilt University; and Tom Collins, Kansas City humorist.

Doctor Bauer was the keynote speaker of the convention and discussed the relation of the Woman's Auxiliary to his department.

Dr. Perry Bromberg's subject was *Trends in Modern Medicine*. He considers public health conservation the most important function of government. He described the types of socialized medicine practiced in Europe. Physicians in England, Germany, and elsewhere reported services rendered by physicians under state medicine are not as efficient as in private practice. Because of lack of time the physician gives less personal service. A comparison of health conditions in the United States with those in

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† As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Robert M. Furlong, chairman of the Publicity and Publications Committee, Linden Lane, San Rafael. Brief reports of county auxiliary meetings will be welcomed by Mrs. Furlong and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

European countries shows that the United States ranks first in every form of medical practice, except the care of industrial accidents, and maintains the highest grade of health for its workers of any people in the world.

The witty, laugh-producing talk Thursday noon by Tom Collins furnished us a well-earned half-hour of relaxation. His subject was *The Care and Treatment of Husbands and Wives.*

The hospitality of the Kansas City women was expressed graciously and bountifully. Drives on two days through the beautiful parks and residence districts were supplemented by teas in private homes.

The appointments of the dinner on Monday night, honoring the founders, officers, and presidents of the auxiliaries of Kansas and Missouri, were particularly beautiful. The function was held at the Kansas City Country Club.

The bring-your-husband dinner was attended by eight hundred persons. The program on this occasion was elaborate, consisting of nine musical, dramatic, and dancing numbers. These were interspersed by assembly singing of clever odes written by Mrs. Sam Roberts, a local physician's wife. Here is a sample (tune, "Home on the Range"):

Oh, Doctor, come home to the children and me,
And call on us—we need you, see!
Set the old black bag down at its place on the floor
Get some rest, let us meet you once more.

Chorus

Home—home from your calls,
Where no fear and alarm on you falls,
With your thumb by your side,
On no pulse must it ride.
We'll plug phones and in peace all abide.

I regard my days in attendance at the convention as an intensive training course in preparation for my work this year. Thank you for the privilege.

Sincerely yours,
ADA COY THORNTON.

* * *

State Auxiliary News

A meeting of the State Board of Directors of the Woman's Auxiliary to the California Medical Association was held at the Del Mar Club in Santa Monica on September 11, 1936. A very good attendance proved the interest with which the work of the year will be carried on. Mrs. Andrew J. Thornton, state president, presided at this meeting.

Problems of the individual auxiliaries and plans for unifying the State Auxiliary were discussed.

Mrs. John Hunt Shephard, convention chairman, urged the members of all the auxiliaries to make reservations for the annual session at Del Monte as soon as possible. This meeting is held in May, 1937, and a large attendance is expected.

A resolution honoring the memory of Dr. William Duffield, our founder, was read. Doctor Duffield was appointed by the California Medical Association to organize a Woman's Auxiliary. On May 8, 1929, during the convention of the California Medical Association then in session at Coronado, he called together the physicians' wives who were present and perfected the organization of the Woman's Auxiliary. Doctor Duffield was untiring in his efforts to make the Auxiliary a success and gave much encouragement and valuable advice to its officers during the early years of its existence.

The following resolution was adopted by the State Board in his memory:

MEMORIAL RESOLUTION

WHEREAS, Our founder and ever faithful counselor and guide, Dr. William H. Duffield, has been called home, having departed this life September 9, 1936; and

WHEREAS, His absence from his accustomed place among us will be keenly felt by those of us who must carry on without him; therefore be it

Resolved, That the Board of the Woman's Auxiliary to the California Medical Association in official meeting assembled September 11, 1936, at Santa Monica, California, pause in its deliberations for one minute, standing with bowed heads, in honor of his memory and to express to his family the deepest regrets and sympathy on behalf of the State Auxiliary, in token of which be it further

Resolved, That a copy of this resolution be presented to the family, a copy spread upon the minutes of this Association, and a copy furnished to CALIFORNIA AND WESTERN MEDICINE.

Committee:
MRS. JAMES F. PERCY
MRS. CLIFFORD A. WRIGHT
MRS. PHILIP S. DOANE

MARGARET M. FURLONG,
Chairman of Press and Publicity.

* * *

County Auxiliary Reports

San Diego County.—The regular meeting of the Auxiliary to the San Diego County Medical Society was called to order by our new president, Mrs. F. G. Lindemulder. A buffet luncheon was served beside the pool of the Hotel del Coronado beach and Tennis Club.

This was a social meeting. The secretary's minutes and the treasurer's report were dispensed with.

Mrs. Paul Wedgewood reported that the treasurer's books had been audited and were found in good order.

Mrs. Elliott Colby gave a short talk on the Community Chest, reminding each member to do her part.

Mrs. Lindemulder called attention to the payment of delinquent dues and that work had been started on the new year book.

The new board and chairmen of the standing committees were introduced by the president.

Mrs. Hiram Newton introduced guests of the day.

After the meeting adjourned, the remainder of the afternoon was spent in visiting and swimming.

ELIZABETH R. BELFORD, *Secretary.*

* * *

San Francisco County.—The first meeting of the coming year of the Woman's Auxiliary to the San Francisco Medical Society took the form of an enjoyable luncheon held at the Western Women's Club on Tuesday, September 15, with Mrs. J. C. Geiger presiding. The attendance was most satisfactory, the East Room of the Club being filled to capacity with a group of eager, earnest women.

Our guest speaker was the secretary of the California Medical Association, Dr. Frederick C. Warnshuis, who addressed us on *Organized Medicine.* Doctor Warnshuis expressed his approval of women's auxiliaries to the medical societies, urging the women to help their husbands by fostering public health meetings in Parent-Teacher Associations, women's clubs and like organizations, in order to acquaint the general public with necessary information along this line.

The Auxiliary is growing rapidly, over twenty-two new members being added to the group since last spring. Not only are we growing in numbers, but in enthusiasm as well, as is being shown by the interest registered in the various activities of the group.

Monthly, on Wednesday mornings at ten o'clock, at the headquarters of the San Francisco County Medical Society, 2180 Washington Street, the following round tables will be held:

First Wednesday—Cause and Cure for War, Chairman Mrs. Fred H. Zumwalt.

Second Wednesday—Social Welfare and Public Health, Chairman Mrs. Frank J. Rodin.

Third Wednesday—History of Medicine, Chairman Mrs. Julius Sherman.

Fourth Wednesday—Legislation, Chairman Mrs. Rodney A. Yoell.

Although the importance of social life in our group is recognized, it may be readily discerned from our program that we aim to take a definite place in the more serious life of our community.

AMY S. ZUMWALT, *Chairman of Publicity.*

Happy is the man who understands his capacities and his limitations. Happy is the group which has so well defined its functions that it invades the province of no other group. Wise is the man, and wise is the group, who, with Plato, can say, "What I do not know, I do not think I know."

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Atlantic City, New Jersey, June 7-11, 1937. Olin West, M. D., 535 North Dearborn Street, Chicago, secretary.

California Medical Association, Del Monte, May 2-5, 1937. F. C. Warnshuis, M. D., 450 Sutter Street, San Francisco, secretary.

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American College of Surgeons, Philadelphia, October 19-23, George W. Crile, M. D., 40 East Erie Street, Chicago, Chairman, Board of Regents.

American Public Health Association, New Orleans, October 20-23. Reginald M. Atwater, M. D., 50 West Fiftieth Street, New York, executive secretary.

Interstate Postgraduate Medical Association of North America, St. Paul, October 12-16. W. B. Peck, M. D., 27 East Stephenson Street, Freeport, Illinois, managing director.

Oregon State Medical Society, The Dalles, October 8-10. Morris L. Bridgeman, M. D., 1020 S. W. Taylor Street, Portland, secretary.

Medical Broadcasts*

The American Medical Association broadcasts have been discontinued for the summer months. A new series is under consideration for the autumn and winter of 1936-1937.

* * *

San Francisco County Medical Society.—The radio broadcast program for the San Francisco County Medical Society for the month of October is as follows:

Tuesday, October 6—KYA, 6 p. m.
Tuesday, October 13—KYA, 6 p. m.
Tuesday, October 20—KYA, 6 p. m.
Tuesday, October 27—KYA, 6 p. m.

* * *

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of October is as follows:

Saturday, October 3—KFI, 9 a. m. Subject: The Road of Health.
Saturday, October 3—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, October 6—KECA, 10:30 a. m. Subject: The Road to Health.
Saturday, October 10—KFI, 9 a. m. Subject: The Road of Health.
Saturday, October 10—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, October 13—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, October 17—KFI, 9 a. m. Subject: The Road of Health.
Saturday, October 17—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, October 20—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, October 24—KFI, 9 a. m. Subject: The Road of Health.
Saturday, October 24—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, October 27—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, October 31—KFI, 9 a. m. Subject: The Road of Health.
Saturday, October 31—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Air Line Transportation for Infants.—Transportation of infants by air is increasing, the latest example being the case of three months old Martin Thomas, son of Dr. and Mrs. Thomas Ferwerda of the Naval Hospital at the Navy Yard in Brooklyn.

A husky, eight-pound boy, only three months old, he was the youngest, smallest child ever to fly from coast to coast without its parents, according to Air Line officials.

Los Angeles County Hospital.—Item from the Los Angeles *Herald-Express* (September 3):

"Le Roy R. Bruce, assistant superintendent of county charities for the last three years, today was appointed assistant executive superintendent of General Hospital at a salary of $5,000 per year by Rex Thomson, county superintendent of charities. The appointment was approved by the Civil Service Commission.

"Bruce will succeed G. W. Olson, who recently submitted his resignation, to become effective October 1. Olson will take over the post of superintendent at the Queen of the Angels Hospital. Before entering county service, Bruce was deputy director of state institutions of California for four years."

Hearing Tests Aid Classroom Work at State University.—In many instances, suspected contrariness, day dreaming, or plain laziness are being eliminated at the University of California as the causes of lack of concentration and lax study habits among students. A health survey made by the Cowell Memorial Hospital on the University campus has determined that physical defects, combined with sensitiveness in a number of instances are the real reasons for low grades, and there is an immediate improvement where these defects are corrected or properly understood.

A test of 4,003 students in the hospital determined that no less than 587 were suffering from defects of hearing which could have affected their scholastic work. Of the latter number, 308 were men and 279 women. In the total group, 101 were suffering the loss of twelve or more sense units out of a possible 100 such units. . . .

State Health Officers' Meeting.—The League of California Municipalities held its annual convention on September 9 and 10 in the City of Santa Monica. The Health Officers' Section had meetings on both days. Among the papers presented by members of the medical profession were the following:

President's Address—Dr. C. M. Burchfiel, Santa Clara County Health Officer.

Public Health in California—Dr. Walter M. Dickie, Director, California State Department of Public Health.

The Social Security Act in Relation to the Health Department—Surgeon Fred T. Foard, United States Public Health Service.

The Next Steps in Public Health—Dr. George Parrish, Los Angeles City Health Officer. Dr. George H. Kress, Member, California State Board of Public Health, discusser.

Venereal Diseases—Dr. George M. Stevens, Epidemiologist, Los Angeles City Health Department. Dr. Lee A. Stone, Madera County Health Officer, discusser.

The Use of Immunobiologic Principles in the Prevention and Control of Civilization Diseases—Dr. Karl F. Meyer, Director, Hooper Foundation for Medical Research.

A Review of Twenty Years' Experience in County Health Work—Dr. J. L. Pomeroy, Los Angeles County Health Officer.

An Original Method for Differentiation of Staphylococci Involved in Food Poisoning—Dr. R. V. Stone, Director, Bureau of Laboratories, Los Angeles County

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* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to California and Western Medicine, 450 Sutter Street, San Francisco, for inclusion in this column.

Health Department. Dr. W. H. Kellogg, Chief, Division of Laboratories, State Department of Public Health, discusser.

The Epidemiology of Tuberculosis—The Health Officer's Opportunity—Dr. Reginald H. Smart, Constultant on Tuberculosis, Los Angeles County Health Department. Dr. K. H. Sutherland, Orange County Health Officer, discusser.

On Thursday the banquet of the Health Officers' Section was held at the Grand Hotel, Dr. George H. Kress acting as toastmaster. The address of the evening was made by Dr. Robert Gordon Sproul, president of the University of California, who spoke on the subject, "The State University in Relation to the Public Health."

New York Automobile Toll Reduced.*—The number of motor vehicle accidents and the number of persons killed and injured were reduced in the first six months of 1936, as compared with the corresponding period of 1935, the Bureau of Motor Vehicles recently reported. The number of accidents was 34,159, compared with 35,503; the number of persons killed 1,047, compared with 1,199, and the number injured 42,867, compared with 44,609. Of the accidents, 16,159 were collisions with pedestrians, 13,031 collisions with other cars. Of 47,418 motorists involved, 295 were listed as intoxicated and 32 as having a physical defect. Of 16,640 pedestrians involved, 470 were said to have been intoxicated, 97 had physical defects and 819 were confused by traffic.—*J. A. M. A.*, September 19, 1936.

Traffic Kills Seven in Los Angeles.*—Under the above caption, the Los Angeles *Herald-Express* of Monday, September 21, 1936, printed the following item:

"Seven more persons were killed and scores injured in traffic accidents reported throughout the county during the past twenty-four hours and a dozen drivers who figured in collisions were arrested on suspicion of drunk driving.

"Official records in the coroner's office today disclosed the distressing fact that 689 persons have lost their lives in traffic accidents in Los Angeles County since the first of the year. Of this number, 352 were killed in the city. Injuries in the city proper to date total 11,050. In the county, 2,697 persons have been injured so far this year."

Summary of Mortality from Automobile Accidents*. The United States Bureau of the Census announces that during the four weeks ending August 29, 1936, eighty-six large cities in the United States reported 665 deaths from automobile accidents. This number (665) compares with 611 deaths during the four weeks ending August 31, 1935. Most of these deaths were the result of accidents which occurred within the corporate limits of the city, although some accidents occurred outside of the city limits.

For comparison, the number of deaths due to automobile accidents within city limits is desirable. Such figures are available for the four-week period ending August 29, 1936, and for the corresponding four-week period of 1935 for all of the eighty-six cities, the four-week figure in 1936 being 484 as contrasted with 441 for the corresponding four weeks in 1935.

For the 52-week periods August 29, 1936 and August 31, 1935, the totals for the cities were respectively 8,436 and 8,997, which indicate a recent rate of 22.7 per 100,000 population as against an earlier rate of 24.1 or a decrease of 6 per cent in the rate during the year.

Four cities reported no deaths from automobile accidents for the last four weeks, and one city reported no deaths from automobile accidents for the corresponding period of 1935.

For the last four-week period reports as to whether deaths occurred from automobile accidents within city limits or outside were received from all of the eighty-six cities reported. In these cities in this four-week period, the total number of deaths from automobile accidents was 665, but only 484 of these were due to accidents within city limits.

Health Exhibit This Year in Wide Range of Health Work.—The *Ohio Health News* states:

"This year's health exhibit at the Ohio State Fair will provide complete coverage of the activities of the State Department of Health, with special emphasis on the broader scope of the work in maternal and child hygiene, milk sanitation, occupational diseases, and public health nursing. All divisions will be represented in the array of charts, graphs and statistical tables, and other features will be exemplified in models, equipment, and photographic displays. An attractive gallery of child hygiene posters has been provided. Samples of literature and lists for visitors to check their needs will be at hand.

The exhibit will be housed in a new location, as last year's site was not available.

Urologic Clinic Before Alameda Society.—Dr. Elmer Hess, one of the country's outstanding urologists, on Thursday, August 13, gave a very interesting clinic on urologic surgery to the Alameda County Medical Society.

American Medical Association Conference of State Association Secretaries and Editors.—The annual conference of state medical association secretaries and editors will be held in Chicago on Monday and Tuesday, November 16 and 17, 1936. The secretary of the American Medical Association has mailed notice of the meeting to all state medical associations.

State University and Stanford in New Drive Against Tuberculosis.—A ten-year program to end any incidence of tuberculosis that may be found in the student bodies of the University of California and Stanford University, and to give impetus to the general drive against the "white plague" in the State, has just been announced by Dr. R. T. Legge, University of California physician, and head of the Cowell Memorial Hospital on the University of California campus.

The plan, now in active operation, includes the examination of every freshman student through intradermal, x-ray, or fluoroscope test for indications of tuberculosis in any and every form. This is in addition to the regular physical examination given each student. Those entrants having active cases of tuberculosis are hospitalized, as usual, while the quiescent or arrested cases are examined periodically, their contacts closely watched, and a regimen of medical treatment laid out for them.

An examination of 1,829 new students on the Berkeley campus at the time the plan was inaugurated, revealed an extremely low incidence of cases of present and suspected activity, there being but three active histories possible, but the number of those disclosing healed lesions was 433. Of the cases of all classifications detected, 35 per cent were men and 28 per cent women. . . .

University of California Experiments Show Food Extract May Cause Cataracts.—The baffling problems surrounding the cause of cataracts in the eye may be a step nearer solution as a result of experiments carried on by Dr. Agnes Fay Morgan, chairman of the Department of Household Science, and Bessie B. Cook, graduate student, in the University of California. In human subjects the drug dinitrophenol, which is presumed to have some efficacy as a fat reducer, is also presumed to produce cataracts. Experiments on subjects other than human, made by the University, now tend to further the claim that certain dietary elements may also be responsible, and that the element of light may not be as important a cataract producer as it has been figured in the past.

In the experiments, conducted by Doctor Morgan and her associate, it was shown that a diet running high in milk sugar or lactose tended to produce cataracts. In a report to the Society for Experimental Biology, they state:

"The delay in, or interference with complete absorption accompanying the presence of large amounts of lactose or galactose in the intestine, and the frequent gastro-intestinal absorption difficulties in clinical conditions associated with vitamin G deficiency, for example, pellagra, pernicious anemia, and sprue, offer a possible common attack upon the problem. The present study was planned to test the bearing of such absorption disturbances upon the production of cataract, of dermatitis and of growth abnormality. . . .

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* See also editorial comment in this issue (page 307).

Californian Goes to Queens Hospital, Honolulu.—News item from the Los Angeles *Herald-Express:*

G. W. Olson, Aide at Los Angeles Hospital Takes Hawaii Post

"Recognized as one of America's leading authorities on hospital management, construction and maintenance, G. W. Olson, assistant superintendent of the Los Angeles General Hospital, today accepted an offer to become the superintendent of the Queens Hospital in Honolulu.

"Olson today tendered his resignation, to take effect October 1, when he expects to leave for his new post. He has been assistant superintendent of the institution since 1932.

"Prior to that he was superintendent of the California Hospital, in the construction of which he was active. He has been identified with hospitals in executive capacities for twenty-five years."

On Tuesday noon, September 15, members of the Swedish and Nordic clubs of Los Angeles and the members of the attending staff of the California Hospital gave a luncheon in honor of Mr. Olson at the University Club of Los Angeles, Mr. Ritz Heerman presiding as toastmaster.

On behalf of the members of the attending and administrative staffs of the California Hospital, Dr. George H. Kress presented to Mr. Olson two traveling cases.

The Sixty-Fifth Annual Meeting of the American Public Health Association. — The American Public Health Association will hold its sixty-fifth annual meeting in New Orleans, October 20-23.

More than one hundred separate scientific sessions are listed, engaging upward of three hundred speakers. There are highly specialized programs designed to solve current problems in the fields of administration, nursing, school health work, health education, sanitary engineering, vital statistics, laboratory practice, child hygiene, industrial hygiene, epidemiology. There are programs covering overlapping interests which involve several groups of specialists who come together in joint meetings for common discussion. There are programs broad enough in scope and of sufficient importance to warrant the attendance of the entire Association in general sessions.

Advances in public health is one such general session. Recent advances in administrative technique, in the control of pneumonia, in engineering practice, in health education methods, in laboratory methods, and housing as a public health problem will be presented by qualified experts.

Other general sessions will deal with diphtheria immunization, mental hygiene, mosquito-borne diseases, and professional education.

A symposium on syphilis is featured.

Other symposia include industrial sanitation, milk and dairy products, infant and maternal mortality, enteric fevers, nutritional problems, registration of births and deaths, care of communicable disease in the home, food poisoning, sanitation of eating utensils, intestinal parasites, school-health education, school nursing, business aspects of the health department, and publicity.

The program of the sixty-fifth annual meeting includes the meetings of a number of related organizations which regularly choose the same convention site and dates. They are: The American Association of School Physicians, the Conference of State Laboratory Directors, the Conference of State Sanitary Engineers, the Association of Women in Public Health, Delta Omega, National Committee of Health Council Executives, the State Registration Executives, and the International Society of Medical Health Officers.

On the invitation of the Cuban Government and Florida health authorities, the Association will sponsor an all-expense postconvention tour to Havana via Florida by train, motor, and steamer. Delegates are invited to join the tour.

The American Public Health Association offers a copy of the program, which includes hotel and railroad information, a summary of the postconvention tour and other details concerning the annual meeting to those who write to the Association's office, 50 West Fiftieth Street, New York City.

Donation of Volumes on Anesthesia to University of California Library.—Dr. C. D. Leake, librarian and professor of pharmacology of the University of California Medical School, has given a special collection to the Crummer Medical History Room of items relating to the history of anesthesia. These range from sixteenth century publications of Valerius Cordus (1515-1544), who discovered ether, to autographed signed letters from Dr. Carl Koller, who introduced local anesthesia in 1884. There is included in the collection inscribed volumes of Humphrey Davy and Horace Wells, who discovered the anesthetic properties of nitrous oxid, pamphlets and books dealing with Morton, Long, and Jackson's introduction of ether, material relating to Simpson's work on chloroform, Claude Bernard's, John Snow's, Richardson's and Gwathmey's general work on anesthesia, and correspondence, manuscripts and original documents concerned with recent developments in anesthesia, including ethylene, "amytal," "avertin," "evipal," cyclopropane, divinyl oxid, and Water's carbon dioxid absorption technique, preoperative medication, and the prevention of local anesthetic toxicity. This collection is particularly interesting because of its relation to the scientific work on anesthesia which has been conducted for the past eight years in the pharmacological laboratory of the School.

Recent deposits in the Crummer Medical History Room include a set of diplomas from Dr. Elizabeth Davis from the University of Pennsylvania Medical School in the early part of the nineteenth century.

First Transparent Woman.—Dr. Dean De Witt Lewis, famous surgeon-in-chief of Johns Hopkins Hospital, Baltimore, Maryland, recently unveiled the Camp Transparent Woman before a distinguished gathering of prominent medical authorities, noted scientists and leading public health officials. S. H. Camp, president, S. H. Camp & Company, Jackson, Michigan, brought the Transparent Woman to the United States as his contribution to public health education.

The Camp Transparent Woman is the first and only one in the world, and will shortly leave the New York Museum of Science and Industry for a nation-wide public health educational tour of one hundred cities which is expected to last more than two years. It will be accompanied by a doctor-lecturer, who will introduce the exhibit to the profession, scientists, and public health officers nationally, and to the general public in a series of lectures to which admission will be free. At the close of the tour it will be given to some prominent medical school or museum for permanent exhibition.

William F. Snow, M. D., general director of the American Social Hygiene Association, lecturer of the Columbia University, Teachers' College, formerly president of the National Health Council and health officer of the State of California, stated in regard to the Transparent Woman:

> There is a great need in this country for more health education through visualizing the essential structures and functions of the human body.
>
> Every man, woman, and child should understand the body as a biologic machine and how to run it.
>
> This transparent life-size figure is a splendid teaching model for giving the public quickly and clearly a knowledge of all the organs and their relations, similar to the knowledge gained from visiting a factory and seeing all the parts of an automobile demonstrated. It is by such methods that the people are prepared for subsequent demonstrations and instruction in what to do to conserve health or to assist the physician whom they consult in efforts to regain their health.
>
> I hope this is the beginning of many coöperative activities of science and industry for promoting health and preventing disease.

The International College of Surgeons.—The establishment of Colleges of Surgeons in the principal countries of the world has resulted in a higher standardization of surgery. Not only has it stimulated surgeons to strive for a higher goal, particularly the younger man, but it has also raised the standards of hospitals until it has eliminated a horror against hospitals which was universal for so many years.

It is timely for an International College of Surgeons to be formed. The International Surgical Society has been in existence for some years. It is a highly respected organization, limited in membership, and under the able leadership of Doctor Mayer of Holland has done good work. But it has made no attempt to broaden its field. The International College of Surgeons, however, with headquarters in Geneva, Switzerland, will open its doors to all reputable surgeons, of all countries, who can pass the severe test examination or who, because of outstanding ability, are recognized as of sufficient eminence to be appointed without examination.

Professor Arnold Jirasek of Czechoslovakia was recently appointed president. Professor Albert Jentzer of Geneva was appointed secretary-treasurer general for Europe. We are happy to state that the appointment of director-general was tendered to Dr. H. Lyons Hunt of New York City, who for years held the same position with the American Medical Editors and Authors' Association.

Naturally, everyone is interested in knowing who, of American surgeons, have already been chosen for Fellowship. For obvious reasons it would be untimely to mention them here. A booklet of their names, addresses, and hospital affiliations has already been prepared.

The number of regents and appointed Fellows throughout the world is limited to one thousand. In the list of American and Canadian surgeons recently sent out, are the names of a few hundred of the most prominent surgeons on this continent. If the same intelligence is used for all honorary appointments, the College will have a nucleus of the greatest men in surgery in the whole world.

The creation of an organization of this kind was bound to meet with a certain amount of criticism. We are not unmindful that the American College of Surgeons had to combat such criticism in its formative years. The answer—the acceptance of Fellowship by the outstanding surgeons of this country and Canada. The College must stand or fall by showing its need, by having on its roster those men in surgery who have always had the highest ideals and who have the courage and leadership ability to make a success of any undertaking to which they have lent their names. Naturally, the administration of such an organization must be placed in the capable hands of men who have vision, who are unbiased and who will work with an idealism which will make the College respected. We feel that a right start has been made. The future will tell the rest of the story.

LETTERS

Concerning annual training course for Medical Department Reservists of the Army and Navy.

Headquarters Seventh Corps Area
Office of the Surgeon
Omaha, Nebraska,
September 1, 1936.

To the Editor:—Inclosed herewith is a notice which is being sent to all reserve officers in this corps area announcing the next, or eighth, annual inactive duty training period to be held at the Mayo Clinic for reserve officers of the Army and Navy.

In past years we have had a number of applicants who had seen notices in your journal or in the *Journal of the American Medical Association.*

We should be very glad indeed to have you use this data as a news item or otherwise, as you see fit.

Kent Nelson,
Colonel, Medical Corps, Surgeon.

* * *

Headquarters Seventh Corps Area
Office of the Surgeon
Omaha, Nebraska,
August 12, 1936.

Surg. 353 or (Mayo Foundation) JRH 4000.
Subject: Medico-Military Inactive Duty Training, Mayo Foundation.
To Medical Department Reserve Officers.

1. The eighth annual training course for Medical Department Reservists of the Army and Navy will be held at the Mayo Foundation, Rochester, Minnesota, from October 4 to 17, 1936.

2. This training course was first inaugurated by the Seventh Corps Area at the request of the Mayo Foundation to give training in military medicine to the younger medical men connected with the Foundation. Other reserve officers requested permission to enroll and to take advantage of the opportunity to attend clinical presentations during the morning hours. Such permission was granted and such attendance has become so increasingly popular that it is now necessary to limit the enrollment.

3. The program will follow the plan of the past years. The morning hours will be devoted entirely to professional work in special clinics and study groups. Officers in attendance may select the course they wish to follow from the wide variety of presentations offered. The afternoons and evenings will be devoted to a medico-military program under the direction of the surgeon of the Seventh Corps Area (Army) and the surgeon of the Ninth Naval District (Navy).

4. This training is on an inactive duty status and is without expense to the Government. Enrollment is open to all Army and Navy reservists of the Medical Departments in good standing. Application should be submitted to the surgeon of the Seventh Corps Area, Omaha, Nebraska, or the surgeon, Ninth Naval District, Great Lakes, Illinois. Enrollment is limited to two hundred.

5. The surgeons-general of the Army, Navy, and Public Health Service have signified their desire to attend at least a portion of the course.

Kent Nelson,
Colonel, Medical Corps, Surgeon.

Concerning treatment of dog bites.

Office of
Director of Public Health
City and County of
San Francisco

To the Editor:—I am enclosing copy of a letter to Mr. Albert Payson Terhune, relative to an article appearing in the *Reader's Digest,* August, 1936, entitled "Beware of the Dog." I thought this would be of interest to you.

Sincerely,
J. C. Geiger, M. D., *Director.*

* * *

September 14, 1936.

Mr. Albert Payson Terhune,
c/o Readers' Digest Association,
Pleasantville, New York.

Dear Mr. Terhune:

I am in receipt of a copy of your article "Beware of the Dog," as published in the *Readers' Digest.* It was sent to me by a young woman dog owner, who was formerly a student of science.

Although we agree with your praises of the animal, the statement discussing the possibilities of rabies infection is perhaps misleading. In many communities a real hazard is present in each dog bite due to the endemicity of rabies. Fortunately this condition does not exist in New York City or in San Francisco. It does, however, even today, exist in many other localities.

Furthermore, your advice "to paint the wound with carbolic acid instead of iodine" is rather poor, as the former is quite a real escharotic and dangerous in the hands of the inexperienced, while both are useless in the treatment of rabies. Fuming nitric acid is usually used by the medical profession. Better advice would be to have a physician take charge of the treatment.

Trusting you will understand my motive in writing and assuring you we have enjoyed many of your stories, I am

Cordially yours,
J. C. Geiger, M. D.,
Director of Public Health.

Concerning Proposition 2 on November ballot.

September 14, 1936.

The Members of the Medical Profession, Addressed.

Dear Doctors:—California physicians are hard hit by the new State tax on personal incomes. It is a bad tax for everyone; but the burden falls heaviest on those whose income-producing asset is professional skill and this is only the beginning.

The California income tax allows you *no credit for earned income.* The tax spenders who framed the law provided for depreciation of buildings and equipment; they ignored the fact that your professional skill is a wasting asset, and is so recognized in every other comparable state, as well as by the Federal Government.

You need not be reminded that, by denying the normal credit for dividends, the tax assesses a heavy penalty against any income you are fortunate enough to receive from invested savings. Nor have you failed to note, in making your first payments to the State income tax collector, that the total is distressingly higher than you were led to anticipate.

The Legislature next year, beyond any question of doubt, will increase the tax unless the voters of California take this direct power out of its hands.

Our physicians' Committee of Allied California Citizens asks your moral and financial support in accomplishing that objective. Proposition No. 2 on the State ballot takes from the Legislature the power to directly dip into wages, salaries and personal income from invested savings. It provides that no tax on personal incomes shall be imposed except by a vote of the people. And, finally, it repeals the personal income tax now in effect. You are invited to enlist in the fight to write Proposition No. 2 into the fundamental law of this state.

Funds are urgently needed to carry on the educational campaign in behalf of Proposition No. 2. The committee of your colleagues whose names appear on this letter, urge you to mail a contribution *now* to Allied California Citizens, 308 Sharon Building, San Francisco.

Enlist with more than your financial help. Do your part, in your circle of friends and acquaintances, by informing and arousing public opinion. Urge them to vote "Yes" on Proposition No. 2, November 3.

Physicians Committee, Allied California Citizens:

LEROY H. BRIGGS, M. D., *Chairman*
DONALD J. FRICK, M. D.
HERBERT C. MOFFITT, M. D.
ROBERT A. PEERS, M. D.
CLARENCE G. TOLAND, M. D.
REGINALD KNIGHT SMITH, M. D.

SPECIAL ARTICLES

Health Exhibit:* New York World's Fair of 1939

Plans for a great health center and permanent public museum of health and hygiene for the New York World's Fair of 1939 were announced September 6, with the formation of an advisory group representing city and national health and medical organizations.

In making the announcement, Grover Whalen, president of the Fair Corporation, said that health and medical science will be ranked as one of the most important phases of the Fair. Plans for the necessary buildings and exhibits are yet to be worked out, but both the Oberlander Foundation and the Carnegie Corporation have already pledged financial aid. Other grants are expected to provide a fund for retaining the exhibits as a nucleus for the permanent museum.

The committee, of which Dr. Louis I. Dublin will be chairman, will undertake a fivefold project involving the establishment of a permanent museum of hygiene such as the famous German institution at Dresden.

The five major objectives as announced are:

1. A complete coördinated health and medical exhibit, illustrating for public education the results of medical research, which would furnish during the Fair a nucleus for a large group of commercial exhibits of products related to health and afterward the nucleus of a permanent institution.

2. A model health village constantly demonstrating equipment and methods in daily use by individuals, families, and communities.

3. Emphasis at every appropriate point throughout the Fair of protective devices and services installed for the benefit of the visitors, which illustrate with commercial advantage the value of the device.

4. Provision for a permanent health center.

5. A strict censorship of medical products and other things sold or promoted on a health basis. . . .

Secretary Calver has just returned from abroad, where he spent eight weeks visiting health museums and expositions to seek material for inclusion in the exhibits here. He brought back more than fifty exhibits from Germany, France, and England for consideration of the Fair committee.

The medical center and exhibits are being planned, it was explained by President Whalen, with the aim of presenting "the material, social and professional equipment now available to society for its health protection and promotion, and to provide a dramatic visualization of the brilliant possibilities for a humanity fully served with these facilities.

"Public health and medicine are deeply concerned with the future of individuals and the race. Their objective is aptly phrased by Doctor Dublin in the statement, 'If we could apply the knowledge we possess we could add ten years to the average life expectancy in America.'"

The health and medical exhibits, it was pointed out in Mr. Whalen's statement, will tell simply of the relation of the exhibits to the individual, with man himself as the central motif. In the exhibit, it is planned to have representations of:

"Models of the human embryo in its various stages of development.

"Formation of habits, nutrition and other problems of bodily and mental development in the early years of life, illustrated with common examples which the visitor may recognize from his own experience.

"Protective devices in school and playground, discovery and correction of defects, organization of the school for health and health teaching, posters, models, plays and programs prepared by the children themselves, would visually demonstrate the beginning of participation by the individual himself in his own health protection and promotion.

"Men and women in adult life, their hazards of occupation, personal hygiene, periodic examinations, accident prevention, responsibilities of parenthood, typical problems illustrated here with moving devices, and mechanical demonstrations, will carry along the dramatic story of man's inward struggle to survive and prosper in his modern environment. . . .

"A considerable section of the exhibit will be devoted to the early recognition of degenerative diseases, such as heart disease, cancer, nephritis, and diabetes. The fact that much may be done to prolong the lives of those who suffer from these diseases should alleviate the mental strain and stimulate sufferers to avail themselves of the skill of surgeons, the benefits of x-rays and radium, the relief afforded by insulin, etc.

"Dominating this section of man himself and visually summing up the health story of his life may be a life-size man, woman and child, all transparent (as was the transparent man at the Century of Progress), naturally posed and inwardly illuminated to furnish a brief lesson in gross anatomy and surrounded with working models of the heart, the lungs and other organs, so that the visitor can see 'how the wheels go round' and thus better understand the care of his body.

"Why do some people get sick and some stay well? The question of immunity affects all age groups. A special section of the exhibit may be set aside to deal with this little-understood problem. What we know about immunity, how it may be acquired naturally and artificially, its possibilities and limitations. This story has never been told wholly and understandably to the public. Working models showing the reactions of toxin and antibodies as they are now understood will provide a sympathetic understanding for immunization and vaccination services."

Other subjects to be included are: Air hygiene and ventilation; nutrition and the food supply; water purification and sewage disposal; municipal cleansing; noise—its cause, effect, and prevention; mental hygiene—what it is and how it serves; epidemiology and the disease detective; protein poisoning—the ragweed and its allies; the sagas of the health heroes of history; quacks, quackery, nostrums, fads, and fallacies; superstitions—old and new—relics of the medicine man.

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* The Golden Gate International Exposition, to be held in San Francisco in 1938, will also present a large health exhibit.

TWENTY-FIVE YEARS AGO[†]

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. IX, No. 10, October,[*] 1911

From Some Editorial Notes:

Variola and Varicella in San Francisco.—According to a recent publication of the United States Public Health and Marine Hospital Service, smallpox is and has been for the past few years quite prevalent throughout the United States. While the disease is of a mild type, and the mortality with few exceptions low, still it behooves us in California in general, and San Francisco in particular, to be constantly on our guard, and to in every way coöperate with the local and state Boards of Health in their endeavors to eradicate the disease.

During the year 1909 over 24,000 cases were reported in the United States, with a mortality ranging from .10 per cent to .50 per cent in most localities up to as high as 20 per cent in Norfolk, Va., and even higher in a small epidemic in South Carolina. The figures for the State of California are incomplete, but the records of the San Francisco Isolation Hospital show that since 1900 an annual average of 124 cases have been treated, with a mortality of less than one-quarter of one per cent for the past four years. . . .

* * *

The Exceptional Child.—In another part of this JOURNAL we publish the very excellent set of record blanks devised by Doctor Grossmann for investigating the physical and mental potentialities of children. Doctor Grossmann in an address to the San Francisco County Medical Society made evident the great importance of a better understanding of child development, and claimed that 25 per cent of our children depart from the normal. . . .

* * *

Disinfection of the Skin.—In the performance of our ordinary surgical operations the possible sources of contamination are the hands of the surgeon, the materials used (instruments, ligatures and sutures, dressings, etc.) and the skin of the patient. By the employment of reasonable care, rubber gloves, gowns and masks, and the usual methods in vogue for the sterilization of our instruments, ligatures and dressings, the surgeon and his materials are rendered reasonably safe. The skin of the patient alone remains. . . .

From an article on "Abnormal Body Temperatures in Injuries of the Cervical Spinal Cord" by Ray Lyman Wilbur, M.D., San Francisco.

The essential clinical features of the case which gave rise to this paper were a sudden, complete and unvarying paralysis and anesthesia of all parts of the body supplied from below the level of the fourth cervical cord segment, diaphragmatic respiration, absence of the sphincter and all other body and limb reflexes except the plantar, which was at times exaggerated, transient priapism, and high temperature with slow pulse rate, all the result of a fracture dislocation in the cervical region. (See paper of Dr. T. M. Williams, *Journal American Medical Association*, July 22, 1911, p. 283, for full case report.) . . .

From an article on "Treatment of Nevus Vascularis by the Use of Carbon Dioxid Snow" by D. Friedlander, M.D., San Francisco.

Within the last ten years, or, more properly speaking, within the last five years, for it is only within that time that it has been brought into practical use, a new remedial agent has taken a definite place in dermato-

(Continued in Front Advertising Section, Page 14)

[†] This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

[*] As stated on page 355 of the September, 1911, issue of the *California State Journal of Medicine*, owing to the illness of its editor, Dr. Philip Mills Jones, the *Journal* was brought out by the Publication Committee.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA[†]

By CHARLES B. PINKHAM, M.D.
Secretary-Treasurer

News

The results of the written examination held in San Francisco July 7 to 9, inclusive, show 146 graduates of medical schools passed the examination, together with thirteen chiropodists and three drugless practitioners. The highest mark (90 6/9 per cent) was made by Kenneth H. Abbott, M.D., Ontario, California, a graduate of the College of Medical Evangelists, June 21, 1936.

A total of 116 applicants took the written examination given in Los Angeles July 21 to 23, inclusive. Altogether, 101 physicians and surgeons passed, together with two chiropodists and one midwife. The highest mark (89 per cent) was made by Oscar Weiss, M.D., Los Angeles, California, a graduate of Rush Medical College, Chicago, Illinois, June 15, 1936.

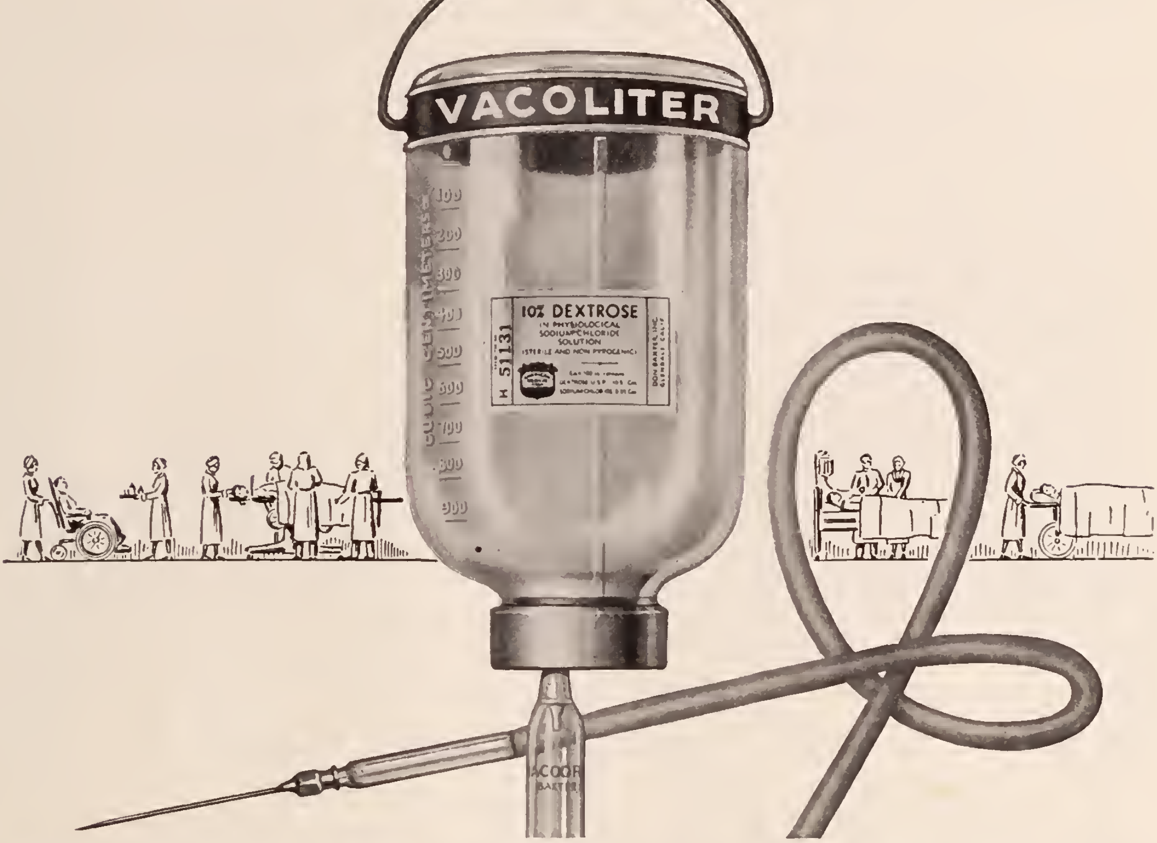
The many years of effort of the California Board of Medical Examiners in the investigation and prosecution of eyesight swindlers gives promise to be brought to a satisfactory termination because of the coöperation of the United States Post Office inspectors. Said the San Francisco *Examiner* of September 18, 1936: "Dealing a smashing blow at what they describe as 'the most vicious band of racketeers in the nation,' postal inspectors tonight had seized thirty fake eye surgeons and wrecked a $5,000,000-a-year bogus medical business. The arrest climaxed an investigation extending over a year. The names of those seized have been withheld by postal officials, pending further arrests within the next week. . . ." An article on the eyesight swindlers, compiled by Secretary Pinkham, was printed in the annual report of the Board of Medical Examiners for 1930. A supplemental pamphlet on this subject was published by Secretary Pinkham in 1933. (See Bulletin of the Federation of Medical Examining Boards, 1933, p. 46.) The secretary of the Texas Board of Medical Examiners has also waged an active warfare against this group of swindlers. Commenting on the activities of the eyesight swindlers, the Santa Rosa *Press-Democrat* of August 9, 1936, in an editorial headed "Their Crime Contemptible," said: "In trading on the credulity and hopes of sufferers from disease in any form, quacks and other deceivers are guilty not only of obtaining money by false pretenses, but of cruelty in one of its worst forms. No mental agony is greater than having the cup of hope dashed from the lips of a person seriously afflicted in body. . . . In this day it is hard to understand how anybody will give a large amount for supposed medical service to any 'practitioner' without knowledge as to his professional standing. Such incidents belong in the category with the criminal activities of organized gangs who pretend to grow gold in flower pots."

Thomas P. Hunter, who passed with a high rating the examination for inspector of the Board of Medical Examiners, recently given by the State Division of Personnel, was on September 1, 1936, appointed inspector for the Board of Medical Examiners for the Northern California District, to succeed Harry G. Henderson.

"Medical and hospital insurance for more than 40,000 California Credit Union members, including 7,500 San Francisco salary and wage-earners, is being planned by the California Credit Union League, it was revealed today by Leo H. Shapiro, attorney, chairman of directors.

(Continued in Front Advertising Section, Page 18)

[†] The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.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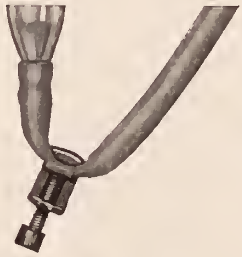

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(Continued from Front Advertising Section, Page 30)

Some doctors give it in the third month or even earlier. Green vegetables should be begun by the sixth month. Potatoes (baked) may be begun at the tenth month, but must not take the place of green vegetables. Dry toast or zwieback may be given after the baby's first tooth has come. Stewed fruit—apple sauce or prune pulp—may be begun at the tenth month.

When the baby is seven or eight months old, ask the doctor about weaning him and about what food to give him. Usually it is a mixture of whole milk (pasteurized), water, and sugar, boiled three to five minutes in a saucepan or cooked for twenty minutes in a double boiler. As a rule, weaning should take about three weeks and should be completed by the end of the ninth month.—*The Children's Bureau, United States Department of Labor, Washington.*

Caring for the Baby.—Proper care of the baby means a regular routine of bathing, dressing, feeding, sleeping, sun baths, play and exercise, and elimination. The mother should plan a regular program for the baby, but the program need not be so rigid that it can never be altered. Proper care of the baby also means planning suitable clothing for him and if possible a well-arranged nursery.

For the nursery, a bright, sunny room is best. If the baby cannot have a room to himself, he should at least have a separate bed. A good bed lets the baby lie perfectly flat. At first a large flat clothes basket will do for a bed, but a crib will be needed as soon as the baby tries to sit up.

Babies need sunlight. When the baby is about three or four weeks old he should begin to take sun baths—outdoor sun baths for the spring and the summer baby, indoor sun baths, through an open window, for the late fall and the winter baby. Sunlight and cod-liver oil help to protect the baby against rickets. When the weather permits, the baby should take his nap out of doors.

The normal baby exercises constantly when awake, crying, kicking, tossing his arms about, stretching, and, later,

(Continued on Page 37)

An X-Ray Power Plant About the Size of Your Hat

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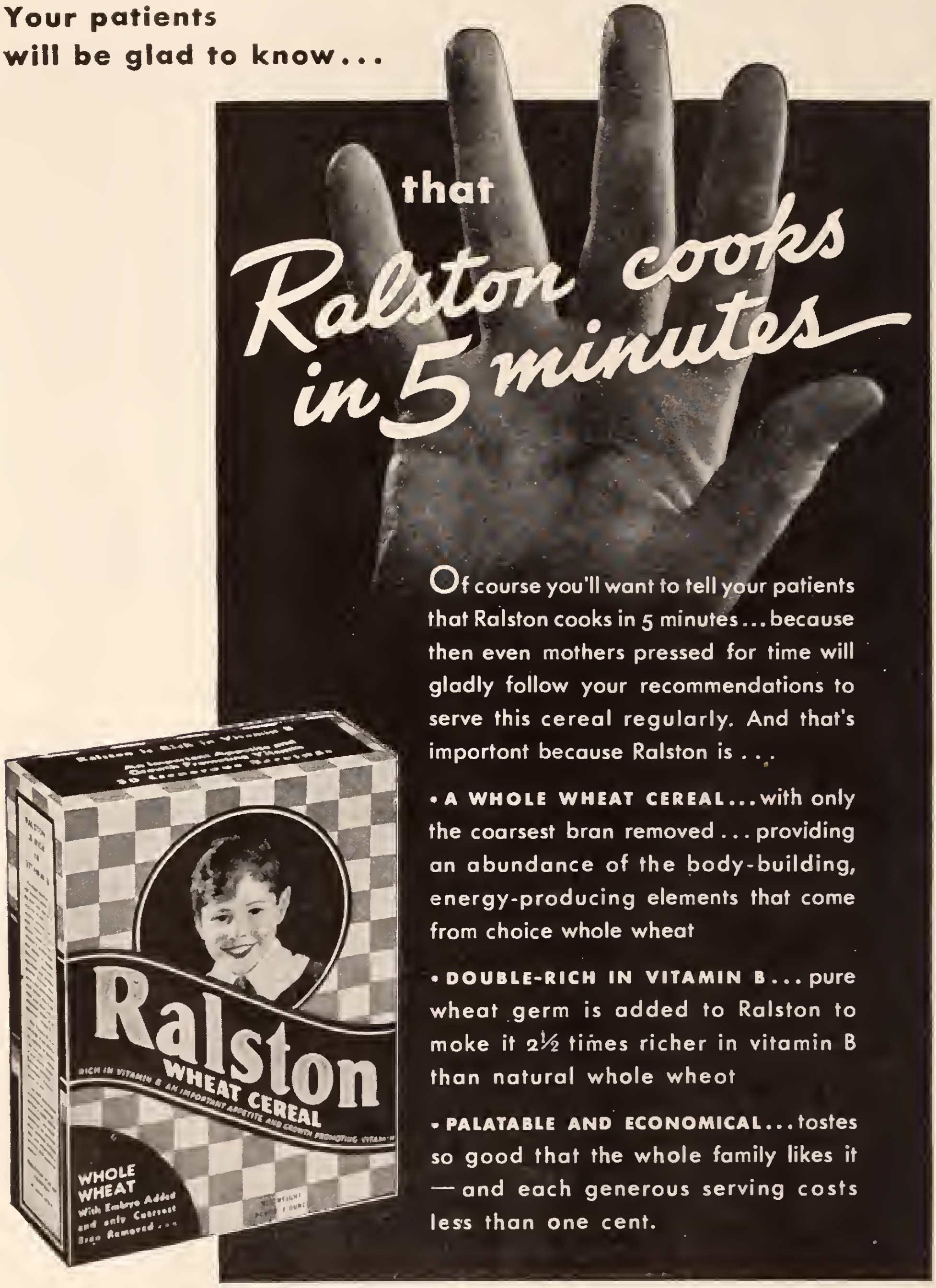
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(Continued from Page 34)

learning to creep. During the baby's waking hours his position should be changed from time to time. The baby needs regular exercise. Twice a day, before his morning bath, and after undressing him for the night, let him kick and play freely on the bed for a few minutes while he is undressed.

The baby's activities should not be restricted by tight clothing. The baby's clothing should be planned for his comfort. According to the weather and also the temperature of the room, porch, or yard, his clothing may range from a diaper alone to a complete outfit of band with shoulder straps, shirt, stockings, flannel petticoat, dress, coat, and cap.

The baby should have his own towels and wash cloths for his daily bath. The bath may be given at any hour that suits the mother, such as before the midmorning nursing.— *The Children's Bureau, United States Department of Labor, Washington.*

Protecting the Baby Against Disease.—Keeping the baby well involves more than careful attention to his feeding, training, and his regular routine. It means careful adherence to the doctor's advice, and it also means avoidance of disease by protecting the baby against communicable diseases.

A complete examination of the baby will be made at birth by the doctor. At least once a month the mother and baby should be seen by the doctor for general advice. In addition, the mother should take the baby to the doctor for a thorough examination at least four times during the first year—at three months, six months, nine months, and twelve months of age.

When the doctor makes a health examination he will undress the baby completely, weigh him, examine his head, eyes, ears, nose, gums, mouth, teeth, tongue, throat, glands, heart, lungs, abdomen, genitals, back, arms, legs, feet, skin, and posture—if the baby is old enough to stand. He will ask about the baby's food and his habits of eating, sleeping, exercise, and elimination.

When the baby is six months old, or soon after, have the doctor immunize him against diphtheria. Before he is one year old have the doctor vaccinate him to protect him against smallpox.

Keep the baby away from anyone who is ill. A person who has "only a cold" or "just a cough" may infect a baby and make him seriously ill. Never take the baby into crowded places, such as stores or theaters. Avoid baby shows.

Keep flies and other insects away from the baby and from his food.

Boil his milk and drinking water and, unless the doctor orders otherwise, cook all his other food except fruit juices and cod-liver oil.—*The Children's Bureau, United States Department of Labor, Washington.*

Maggot Study Yields New Facts on Urea.—Digging deeper into the recent mystery of how blowfly maggots stimulate healing in stubborn wounds, a fact observed by surgeons during the World War, Dr. William Robinson of the United States Department of Agriculture now announces the possibility that urea, a well-known and widely distributed chemical, may be responsible along with allantoin for this remarkable healing produced by maggots.

Doctor Robinson has been investigating this subject in the Division of Insects Affecting Man and Animals, Bureau of Entomology and Plant Quarantine. He announced last year the discovery of allantoin in maggot excretions. He now finds that urea is present also. Preliminary tests indicate that the pure synthetic chemical by itself induces the same healing as maggots or allantoin. These preliminary observations, of course, must be supplemented by additional clinical tests by competent physicians—and this is outside the scope of the Department's investigations.

In an article appearing in the August number of the *American Journal of Surgery*, Doctor Robinson cites case histories provided by physicians, surgeons, and dentists,

(Continued on Next Page)

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(Continued from Preceding Page)

who have used urea solution in the treatment of osteomyelitis, gangrene, old ulcers, stubborn wounds, infected burns, and nonhealing gums and tooth sockets. The reports are encouraging. If borne out by subsequent clinical tests, Doctor Robinson's discovery will be of great importance to the medical profession.

These physicians and many others became interested in the use of urea through a previous interest in allantoin, which in fifteen months has come into extensive manufacture and wide use from the starting point of an obscure and practically unused chemical.

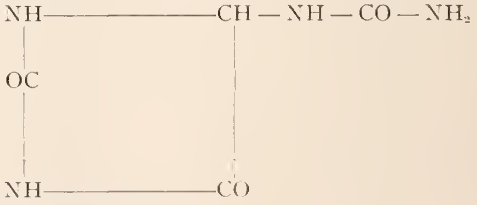
Urea is present in the tissues and blood of animals and humans and is of common occurrence in plants, including many used as food, such, for example, as spinach. However, it got its name from the fact that it was first found in urine, in which form the excess nitrogen is removed from the body. Urea is of great historic interest since it was the first organic chemical ever to be made synthetically. That epoch-making discovery was made more than one hundred years ago.

Urea is an almost snow-like, crystalline chemical, and under the microscope a pinch of it looks like a miniature log jam of sparkling stacks of ice. Chemists now make it by the ton by combining three gases which occur in air or water—nitrogen, hydrogen, and carbon dioxid.

In the treatment of wounds, urea has been used mostly as a two per cent solution, but, unlike allantoin, it is highly soluble and heavy solutions may be made. Pure urea, much used by doctors as a diuretic, sells for only a small fraction of the price of allantoin.

Attention was called to the healing possibilities of urea not only because it was associated with allantoin in maggot excretions, but also because the chemical "picture" of allantoin shows how easily its "side chain" might be "chipped" off by hydrolysis to form urea. It has been suggested that this "chipping" may occur when allantoin is used in wounds, leaving urea as an active agent in healing.

The structural chemical formula or "picture" of allantoin is:



The formula for urea is:

$NH_2 — CO — NH_2$

Treatment of Gonorrhea in Women.—Notes describes the clinical treatment of 2,129 positive cases of gonorrhea of the female genitalia over a period of four years. Positive diagnosis was based on smears with Gram-negative intracellular diplococci having the morphology of the gonococcus combined with objective clinical signs. Extracellular Gram-negative diplococci were considered suggestive. Each patient was observed two months for recurrence of positive smears. The basis of treatment in the beginning was drainage and antisepsis. In 1931 the antiseptics used in treatment included iodin and compound solution of cresol as douches and by topical applications, and of 384 cases admitted four were discharged. In 1932 the antiseptics used included iodin, compound solution of cresol, mercurochrome, and 10 per cent silver nitrate, and of 522 patients admitted eighteen were discharged. In 1933, of 546 cases admitted forty-eight were discharged. In August, 1933, treatment on the bases of creation of local reaction and drainage with the omission of antiseptics was begun as follows: All cervices with cervical glands functioning were cauterized one or more times with the electrocautery at intervals of two or more months in order to cause local reaction and to give better drainage of the active focus. The urethral meatus and the cervix were treated weekly with applicators saturated with 25 per cent solution of

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silver nitrate. Five per cent sodium bicarbonate douches were taken by the patient at home twice daily. Nightly instillations of 1 drachm (4 cubic centimeters) of 1 per cent lactic acid jelly were made by nozzle to the vaginal vault in order to promote the normal bacterial flora and to get rid of secondary invaders, which cause desquamative vaginitis. During the first six months of this period, clinical improvement and increase in negative smears were marked. The author concludes that antiseptics should be abandoned in the treatment of gonorrhea in women.—*American Journal of Obstetrics and Gynecology.*

So-Called Ptomain Poisoning.—Goforth says there is no justification for the continued use of the expression ptomain poisoning. Food infection, the invasion and growth in the body of pathogenic microörganisms capable of producing toxins, and food intoxication, a poisoning produced by toxins formed by bacteria in food before ingestion, constitute the largest and most important varieties of acute food poisoning. The organisms of the Salmonella group, particularly Bacillus aertrycke, enteritidis and suipestifer, are responsible for the majority of outbreaks of acute food poisoning. These organisms are capable of forming a heat-resisting irritant, which can produce acute gastro-enteritis. The sources from which the organisms causing bacterial food poisoning are derived are not completely known. Protein foodstuffs, particularly meat and milk products, are the vehicles of infection in the majority of instances. Laboratory methods are necessary in proving the diagnosis and etiologic factors of food poisoning. They should be more frequently employed when the physician makes his initial detailed study of the case. Accurate conclusions presuppose the support of pertinent clinical data. The increasing number of medico-legal cases of food poisoning emphasizes the necessity for the early, complete and accurate collection of data and materials for examination in each case by all associated with the case. The prevention of bacterial food poisoning depends to a large extent on the coördinated activities of the laboratory workers, the public health officer, the veterinarian, the nurse, and the general practitioner. Rigid standards of sanitation regarding the preparation, preservation, handling and exposure of foodstuffs should be maintained. Extended research is needed to bridge the gaps in our knowledge of bacterial food poisoning.—*Southern Medical Journal.*

Medical Progress in the Philippines.—In 1935 there were in the Philippines a total of 2,901 physicians for an estimated population of about 13,500,000. There was, therefore, one physician for every 4,700 inhabitants, or about twenty-one physicians per hundred thousand of the population. This compares with 126.6 physicians per hundred thousand of the population in the continental United States. A review of the past and present medical services in the Philippine Islands has recently appeared under the auspices of the local medical society. Medical services are rendered by the Philippine Government, private practitioners, private corporations, semigovernmental institutions, and the United States Government.

One way of measuring the efficiency of medical services is comparison of the mortality rates. This is a crude method and subject to numerous modifying factors, but it does give information. For many years there has been a steady decline in the mortality rates in the islands. From a rate of 39.7 during the Spanish régime it shot up to 50 from 1899 to 1903 and came down to 27.05 in 1904. Since 1904 there has been a gradual decline, except for 1918, and since 1921 it has been below 20 per thousand. This rate compares with a rate of 14.7 for the United States, 40 for China, and 28 for Spain. It is still higher than the rate of the Anglo-Saxon countries, but, with the exception of Japan, the lowest of the oriental. It is also lower than the rates of Puerto Rico, Spain, and Mexico.

Part of the high death rate has been due to infant mortality, largely infantile beriberi. The effectiveness of the campaign to reduce infant mortality is illustrated by the decrease in the infant death rate from 225 per thousand in 1904 to 140 per thousand in 1933.

(Continued on Page 41)

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For Children's Colds

THE ease of application which makes Benzedrine Inhaler so useful with adults is even more important in treating the congestion occurring in children's head colds. The vapor form—in addition to its greater effectiveness — overcomes the strenuous objections which children show to liquid inhalants as applied by drops, tampons or sprays.

Furthermore, the simplicity of Benzedrine Inhaler makes it especially suitable for pediatric use; it has been shown to have no deleterious effect even on the delicate cilia of the nose. Nor is there any oil to be aspirated and become a potential source of later trouble by accumulating in the lungs (Graef: Am. J. of Path., Vol. xi. No. 5, Sept., 1935).

Secondary reactions are "so infrequent and so mild as to be virtually negligible" (Scarano: Med. Record; Dec. 5, 1934), and even in very young children, overstimulation or other undesirable reactions do not occur with the proper dosage.

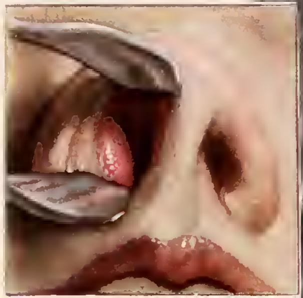

FIG. 1. J.M.C. White, female, age 4. June 5, 1936. Acute rhinitis.
11:40 A.M. Two inhalations of Benzedrine inhaler.

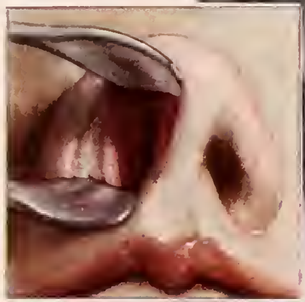

FIG. 2. 11:50 A.M. Maximum shrinkage evident.

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BENZEDRINE INHALER

A Volatile Vasoconstrictor

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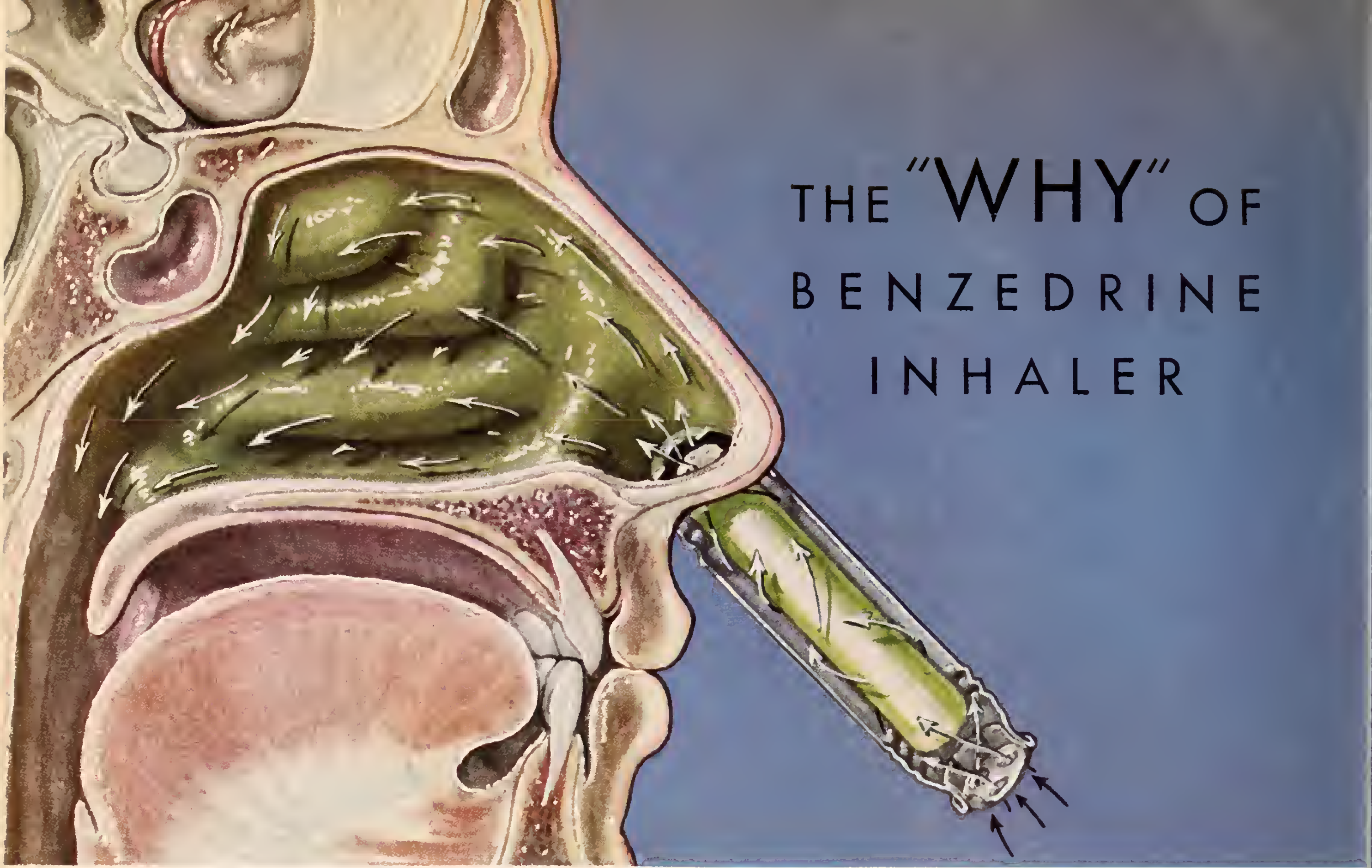

THE "WHY" OF BENZEDRINE INHALER

- The structure of the rhinological tract is so complicated that, when congestion is present, the whole of the affected area cannot easily be reached by a liquid vasoconstrictor.
- On the other hand a volatile vasoconstrictor diffuses throughout the entire nasal cavity. Benzedrine* is a vasoconstrictor combining VOLATILITY with a POTENCY greater than that of ephedrine.
- To present these two properties of Benzedrine in the simplest and most convenient manner, the inhaler form was adopted—an aluminum tube with gas-tight screw caps, containing a cotton roll impregnated with Benzedrine.
- Thus, though the word ''inhaler'' may suggest the outmoded aromatic inhalers of the past, actually this presentation of Benzedrine is logically dictated by the properties of the drug itself.
- And Benzedrine Inhaler—effective, convenient and inexpensive—marks a distinct therapeutic advance in the symptomatic treatment of head colds, sinusitis, vasomotor rhinitis, hay fever and nasal congestion generally.

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BENZEDRINE
INHALER

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*Trade Mark Reg U. S. & Can. Pat. Offs.

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(Continued from Page 39)

Another important fact brought out by this report is the large share of credit due the private practitioners for the improved conditions. Of the 2,901 medical practitioners in the Philippines only about 745 are in the service of the Philippine Government and about sixty-eight in the service of the United States Government. There has been a considerable increase in the number of medical men in the Philippines, so that the average age of the physicians is relatively low (thirty-eight) and a high percentage are still, therefore, in the prime of life. While this is an advantageous factor, the report clearly shows that there is room for still further increase in the number of physicians and especially for their better distribution. The number of hospitals also has increased from seventy in 1924 to 147 in 1934.

Fernando, who wrote the report, also points out that the remarkable improvement in health attained during the American régime in the Philippines has occurred with a high degree of coöperation between private practitioners and governmental agencies and that neither compulsory health insurance nor complete government practice of medicine has at any time been necessary. There seems to be no question that this improvement will continue, if judged by the constructive recommendations embodied in the report. The time-tested methods of medical progress are clearly shown not to have outworn their usefulness.—*Journal of the American Medical Association.*

Anesthesia.—Sykes points out that it is possible to reduce postoperative mortality below the 4 to 5 per cent average. Certain minimal essentials are required to create a satisfactory service. (1) Resident anesthetists should be appointed at all large hospitals without exception. (2) No person should be appointed as visiting anesthetist without previous experience as resident, thus bringing anesthesia into line with all other branches of medicine and surgery. (3) Anesthetic clerkships should be compulsory for the better instruction of students. (4) It should be an absolute rule that no dresser be allowed to give an anesthetic except under direct supervision. (5) Patients in private wards should invariably get what they pay for—the personal care of an experienced anesthetist. Under no circumstances should the same fee be payable to a senior member of the staff and to a newly qualified house surgeon. (6) The equipment of many hospitals requires a drastic overhauling. Good modern gas machines should always be available. (7) These machines, though robust, are not foolproof. Therefore, no one except people familiar with their construction and mechanism should be allowed to use them or they will never be in working order, nor will satisfactory anesthesia be obtained. Financial considerations in the form of repair bills may thus do what the interests of the patient have failed to do; that is, protect patients against the dangers of unskilled and unsupervised anesthesia. (8) As the science of anesthesia is constantly changing and constantly advancing in common with the rest of medicine and surgery, provision should be made so that suggestions for reforms and improvements may be brought to the notice of the governing body without loss of time.—*British Journal of Anesthesia (Manchester).*

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CALCIUM	173.3 parts per million
MAGNESIA	339.3 parts per million
SODIUM	365.0 parts per million
SILICA	93.0 parts per million
CHLORINE	38.3 parts per million
SULPHATE	16.1 parts per million
NITRATE	0 parts per million
PHOSPHATE	.7 parts per million
CARBONATE	1551.4 parts per million
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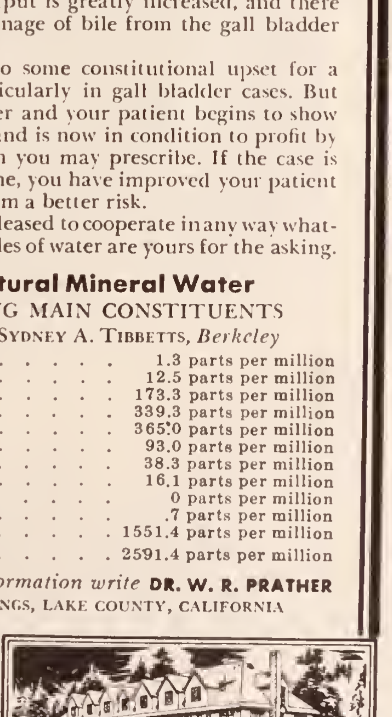

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No enterprise in the wide range of human experience can rank with training the mind. If, therefore, we have received from heaven nothing so good as the mind, what should be more worthy of exercise and cultivation? No other adventure is to be compared with it. Through it civilization and all man's higher achievements have been won. The report of a gun does not carry so far as the music of the lyre. To pursue intellectual ideals, unlike the privilege of galloping with a king in a royal game park, is a glorious adventure open to every man who cares to live richly and well.—Leon J. Richardson.

Other ways may fail, but one can always tell a second-rate man by the quality of his emotions. The laughter and the tears of a second-rate man are divining rods that no university training, social experience, worldly culture or tailor, can hide.—George Jean Nathan.

I hope that here in America more and more the ideal of the well-trained and vigorous body will be maintained neck and neck with that of the well-trained and vigorous mind, as the two coequal halves of the higher education for men and women alike. The strength of the British Empire lies in the strength of character of the individual Englishman taken all alone by himself. And that strength, I am persuaded, is perennially nourished and kept up by nothing so much as by the national worship, in which all classes meet, of athletic outdoor life and sport.—William James (1890).

To me it seems as if when God conceived the world, that was poetry; He formed it, and that was sculpture; He varied and colored it, and that was painting; and then, crowning all, He peopled it with living beings, and that was the grand, divine, eternal drama.—Charlotte Cushman.

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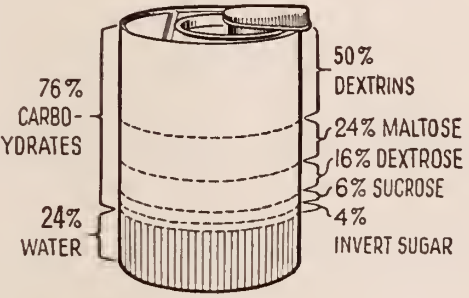

(2) Concentration —When you consider that volume for volume, Karo Syrup furnishes *twice* as many calories as a similar sugar modifier in powdered form, you realize *how* strongly saturated Karo is in calories of maltose-dextrins-dextrose. A tablespoon of Karo Syrup yields 60 calories while a tablespoon of powdered maltose-dextrins-dextrose gives 29 calories. Karo Syrup is a concentrated milk-modifier!

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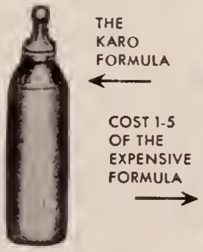
Karo Syrup contains twice as many calories as... *Powdered Maltose-Dextrins-Dextrose including Karo Powdered*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Organization of Blood Donors in Germany.—The organization of blood donors is awakening great interest in Germany. The Städtischer Blutspendernachweis, established in the Rudolf Virchow-Krankenhaus in Berlin, has now 128 donors available, five of whom are women. A donor may furnish blood only once a month, and the amount furnished is restricted to 500 cubic centimeters. The compensation for loss of time or earning power by reason of a transfusion is 15 marks ($6). For purposes of general control each donor is provided with a record card, the entries on which correspond with the entries recorded in the filing cabinet at the blood donors' central. The blood donors' central is in a position to furnish within a short time the donor required, previously examined as to blood group.

Since April 1, 1934, Leipzig also has had a blood donors' central, which was created at the instance of Professor Morawitz and is under his direction. During the first year, 106 blood donors were furnished. Applicants were not accepted unless they were free from all signs of infectious disease, presented at least 80 per cent of hemoglobin and 4,500,000 erythrocytes, also a normal number of leukocytes with a normal distribution (no shift to the left and no eosinophilia); their veins had also to be adapted to blood transfusion. As Doctor Seggel of the Medizinische Klinik in Leipzig has emphasized, it was found necessary to make careful inquiries in regard to the moral reputation of applicants, since in a few donors greed predominated over moral principle, while occasionally a donor was found to be morally unsound. It is emphasized that "only donors of pure Aryan ancestry are accepted." As a rule they are either students or members of the national-socialist party. For each hundred cubic centimeters of blood (or fraction thereof) 5 marks ($2) is paid in Leipzig. The Leipzig Krankenkassen do not hesitate to assume these charges. A large percentage of the donors are from the unemployed. In Leipzig the largest amount of blood to be supplied by a donor at one time is ordinarily 400 cubic centimeters; only in an emergency may a larger quantity be taken. As a rule, if more than 400 cubic centimeters is required, two donors must be summoned. In Leipzig also no donor may be used within a month of a previous transfusion. Not only the qualities of the erythrocytes are tested, but also the nature of the blood serum. In Leipzig and in Frankfort-on-Main, donors are reëxamined every three months; in Berlin and in Vienna every two months. When reëxamined the donor must state in writing, on his word of honor, that in the meantime neither he nor any member of his family has been affected with syphilis or other infectious disease. No examination is made immediately before the transfusion; this responsibility, as with the transfusion itself, rests on the physician in charge of the intervention. The Leipziger Krankenhaus, which has undertaken the task of organizing the blood donors, exacts a fee of 5 marks ($2) to cover the general expense. During the first year of the activities of the Leipzig blood donors' central, 420 blood transfusions were performed through its mediation. The group distribution of the 106 donors was as follows: group O, 37.7 per cent; group A, 39.6 per cent; group B, 15.1 per cent; group AB, 7.5 per cent. Of the 420 transfusions, 192, or 45.7 per cent, were performed with blood of group O; 166, or 39.5 per cent, with group A; 50, or 11.9 per cent, with group B, and 12, or 2.9 per cent, with group AB. Each donor supplied blood, on an average, 3.96 times; each donor of group O, 4.8 times, and each donor of the AB group only 1.5 times. The cause for this differentiation does not lie in the fact that frequently unmatched blood was transfused. That occurred in only seven cases (transfusion of O blood to two patients belonging to the A group, two patients of the B group, and three patients of the AB group). The donors of the O group were not examined to discover whether they were "dangerous universal donors" with a high titer of agglutinin in their blood serum. If, for some special reason, a physician desires to transfuse blood to other groups, he

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Calso Water: Made of distilled water and the ALKALINE SALTS (C. P.) normally present in the healthy body.

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should first convince himself that no danger is associated therewith. In Germany the certification is usually based on uniformity in the grouping of the donor and the recipient. In Paris, however, many universal donors appear to be employed. The total amount of blood involved in the 420 transfusions performed in Leipzig during the first year after the new service was established was 155,000 cubic centimeters. The average amount of blood withdrawn, taking all the transfusions into account, was 370 cubic centimeters. The 420 transfusions were received by 224 patients, 63 per cent of whom received only a single transfusion. The most transfusions (twenty-one) were given in a case of panmyelophthisis; the patient, however, succumbed in spite of a total of 8,430 cubic centimeters of blood injected. Untoward incidents, according to the records in the filing cabinet, occurred in Leipzig in thirty cases (7.14 per cent), although the donors and recipients were properly matched. The accidents were for the most part of a mild nature, ranging from a slight to a more violent chill. In two cases the recipient developed icterus, in one instance on the day of the transfusion and in another case after from eight to ten days. The causes for these manifestations were not explained. No injuries to the donors were observed in any case.

In Thuringia a group of blood donors has been organized by the Schutzstaffeln, a society formed within the ranks of the National-Socialist Party. There are now 214 members of this group available, their residences being widely scattered over Thuringia. The division of the blood groups corresponds to that of Leipzig, which in fact may be taken as the norm for Germany as a whole. But, in contrast with Leipzig, the dangerous universal donors of group O, whose blood has an abnormally high antibody content, are eliminated by application of Coca's method. The donors in Thuringia are free from tuberculosis and syphilis and have no narcotic or alcoholic addiction. Here also blood donor centrals have been created.

Just recently the commander-in-chief of the German army issued regulations concerning the determination of

(Continued on Next Page)

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Extract (Solids by weight)	9.18
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Maltose	0.54
Dextrins — Dextrose — Pentosane	5.42
Glycerine	0.125
Lactic Acid, grms per 100 cc	0.19
Mineral Matter	1.69
End degree of fermentation	63.85

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(Continued from Preceding Page)

blood groups in the army. It is being introduced as a routine element of the regular physical examination. For the present, all the soldiers entering military hospitals will be subjected to such a test.

Air Raid Precautions.—The precautions recommended by the British Government against gas poisoning in air raids have been reported in previous letters. Under the title "Rescue Parties and Clearance of Débris" the Air Raids Precautions Department of the Government has issued a memorandum describing the organization recommended for dealing with buildings and roads. It is suggested that this should be attached to the highway department of the local authorities. Whatever area becomes the unit of organization, arrangements should be made with neighboring areas for assistance in case of need. Rescue parties should be organized to release persons trapped in damaged buildings. They should consist of six or eight men, including a skilled foreman. For a densely populated area three or four rescue parties should be provided for every 100,000 of population (two on duty and two in reserve). Apart from their value in time of war, the memorandum adds, persons trained in rescue work might be of value in the case of the collapse of a building in time of peace. Attention is directed to the difficult and dangerous nature of the work, and it is suggested that skilled men should be used in the nucleus of the organization. For training men in the kind of equipment required, assistance could be obtained from such local sources as the fire brigade, mine rescue stations, engineering works, and builders and demolition contractors. Some training in first aid and in the use of gas respirators is also suggested. The occupants of property liable to flooding in the event of an air attack should be warned against taking refuge in basements or ground-floor rooms.

Antigas Instructions. — The Government has issued a circular to all the county and borough councils giving the arrangements for a course of instruction at the civilian antigas school to be established at Failfield, Gloucestershire. The Government will train instructors at the school, who can be obtained by the local authorities for instruction in their localities. The Government will also provide the necessary respirators and protective clothing for local training. The syllabus for the general course will include the principles of civilian antigas precautions, first aid, decontamination and recognition of poison cases. There will also be specialist courses. Each course will as far as possible be composed of persons interested in antigas measures from a common standpoint. Thus separate courses will be provided for instructors primarily concerned in the following duties: (1) police and fire department; (2) first aid, rescue and ambulance work; (3) decontamination of materials; (4) repair of water and gas pipes, cables, and wires that may be contaminated by gas. Two specialist courses, each lasting a week, are contemplated at present. One will be for physicians and nurses and will deal with the medical treatment and care of gas casualties. The other will be for the training of chemists in the detection and identification of gases.—*Foreign Letters, Journal of the American Medical Association.*

Immunization Against Influenza.—At the congress of the Royal Sanitary Institute, Prof. W. C. Topley, who occupies the chair of bacteriology and immunology at the London School of Tropical Medicine and Hygiene, said that two strains of influenza virus were being propagated in ferrets and mice and that before long it would be possible to immunize effectively against the disease. This would be one of the major victories of preventive medicine. He said that vaccination against a virus disease tended to be far more effective than vaccination against a bacterial disease.

There is a principle which is a bar against all information, which is proof against all argument and which cannot fail to keep a man in everlasting ignorance. That principle is "condemnation before investigation."—Herbert Spencer.

The Doctor

Who comes when we are in distress?
The doctor.
Who hears our call and answers: "Yes"?
The doctor.
Who four and twenty hours a day
Is never sure of rest or play
And cannot put his work away?
The doctor.
Who asks no shelter from the rain?
The doctor.
Who braves all storms to comfort pain?
The doctor.
Who in the banquet hall will rise
And all its pleasures sacrifice.
Because somewhere a baby cries?
The doctor.
Who knows no bedtime fixed and sure?
The doctor.
Who all our worries must endure?
The doctor.
Who must his every nerve command
In times of greatest peril, and
Work with a calm and steady hand?
The doctor.
Who to the poor the friend will play?
The doctor.
Who sometimes never gets his pay?
The doctor.
Who, having skill and growing wise,
Must to great profits shut his eyes
And neither boast nor advertise?
The doctor.
Who most deserves man's gratitude?
The doctor.
Who is it prayers should oft include?
The doctor.
Who all through life is standing by,
From birth and that first happy cry
Unto the last, when death is nigh?
The doctor.

—Edgar A. Guest.

He has achieved success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task; who has left the world better than he found it, whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's beauty or failed to express it; who has looked for the best in others and given the best he had; whose memory is a benediction.—Mrs. A. J. Stanley.

The most important quality of education is flexibility. Flexibility is allied to play. Play is the essence of adaptability, and there is no prescribed pattern for it. Opportunities must be used as they come along.—Boyd H. Bode (1932).

Do not spend your days waiting for an angel to deliver realized hopes at your door. Go out and toil for them. There are few forms of hard work more wearying than waiting.

Better keep yourself clean and bright; you are the window through which you must see the world.—G. Bernard Shaw.

It is better for a man to maintain himself in good health than to load himself with learning.—Arnold Bennett (1920).

Not All the Spellbinders Speak From a Platform

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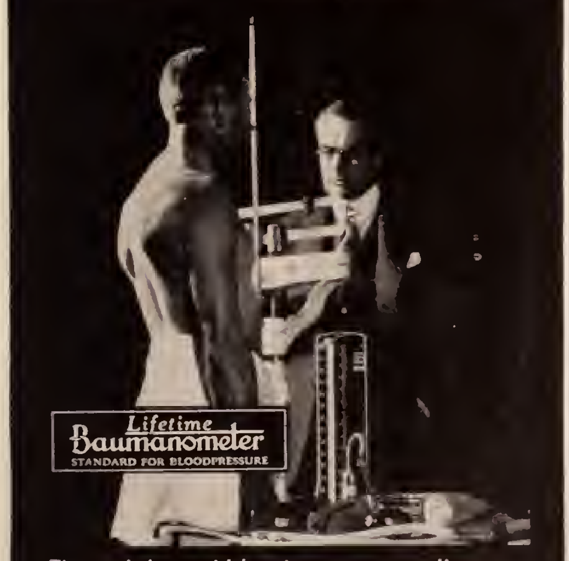

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(Roster lists continued on advertising page 6)

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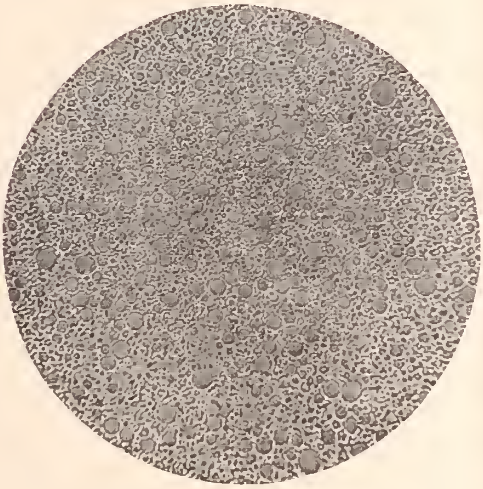

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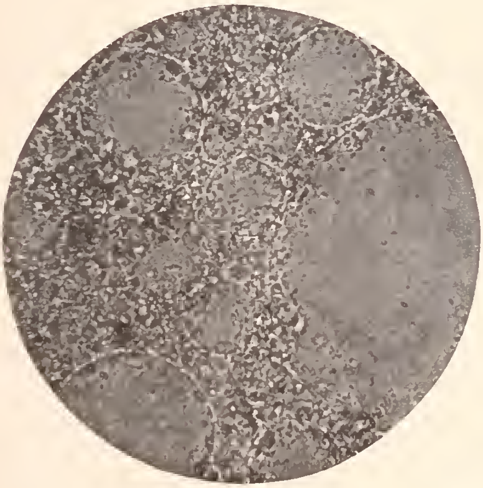

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Treasurer, John Gallwey, 1195 Bush Street, San Francisco.
Secretary, Celestine J. Sullivan, 490 Post Street, San Francisco.

Hospitals and Sanatoriums

The Institutions here listed have announcements in this issue of California and Western Medicine. For Index, see advertising page 8.

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For Treatment of Tuberculosis
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CALIFORNIA SANITARIUM
For Treatment of Tuberculosis
Belmont, California

CANYON SANATORIUM
For the Treatment of Tuberculosis
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BOOK REVIEWS

Books received for review are placed in the Library of the California Medical Association, in its central office at San Francisco. Book reviews are written by the Association Secretary.

BOOKS RECEIVED

Modern Treatment of Diseases of the Respiratory System. By A. Lisle Punch, M. B., M. R. C. P., Senior Physician, Royal Northern Hospital; Physician Brompton Hospital for Diseases of the Chest, and F. A. Knott, M. D., M. R. C. P., Dr. P. H., Director of Bacteriological Department and Lecturer in Bacteriology to Medical and Dental Schools, Guy's Hospital. Reader of Pathology, University of London. Washable cloth. Pp. 295, with 96 plates and 31 text figures. Price, $5. Philadelphia: P. Blakiston's Son & Company, Inc., 1936.

Oral Diagnosis and Treatment Planning. A text for the dental student, a reference book for the practitioner and medical student. By Kurt H. Thoma, D. M. D., Charles A. Brackett, Professor of Oral Pathology in Harvard University; Oral Surgeon to the Brooks Hospital; Consulting Oral Surgeon to the New England Baptist Hospital; Consulting Oral Surgeon to the Tumor Clinic of Beth Israel Hospital. Cloth. Pp. 379, with 533 illustrations, 71 of them in colors. Price, $6 net. Philadelphia: W. B. Saunders Company, 1936.

A Textbook of Obstetrics. By Edward A. Schumann, A. B., M. D., F. A. C. S., Professor of Obstetrics, School of Medicine, University of Pennsylvania; Surgeon-in-Chief, Kensington Hospital for Women; Gynecologist and Obstetrician to Philadelphia General and Memorial Hospitals; Obstetrician to Chestnut Hill Hospital; Consulting Gynecologist to Frankford, Jewish, Burlington County, and Rush Hospitals. Cloth. Pp. 780, with 581 illustrations on 497 figures. Price, $6.50 net. Philadelphia: W. B. Saunders Company, 1936.

Lane Medical Lectures: Studies in Cardiovascular Regulation. By C. V. Anrep, M. D., S. Sc., F. R. S., Professor of Physiology, Medical Faculty Egyptian University, Cairo, Egypt. Medical Sciences, Volume 3, Number 3. Cloth or paper. Pp. 118. Price: Paper, $1.50; Cloth, $2.25. Stanford University: Stanford University Press, 1936.

Brain Reflexes and Laws of Existence. By William D. Hoffman, M. D., Ph. D. Cloth. Pp. 308. Price, $10. Los Angeles: Parkman Press, 1936.

Research in Dementia Praecox. (Past Attainments, Present Trends, and Future Possibilities.) By Nolan D. C. Lewis, M. D., Professor of Neurology, Columbia University, Associate Medical Director, Neurological Institute of New York, Field Representative and Coördinator of Research in Dementia Praecox, Founded by the Northern Masonic Jurisdiction of the Scottish Rite. Cloth. Pp. 320. Price, $1.50. New York: The National Committee for Mental Hygiene, 1936.

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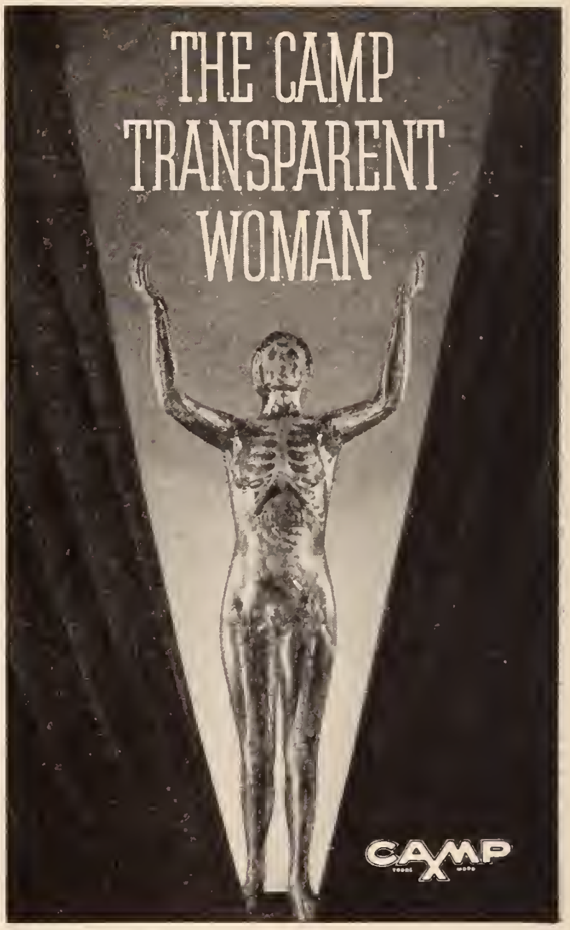

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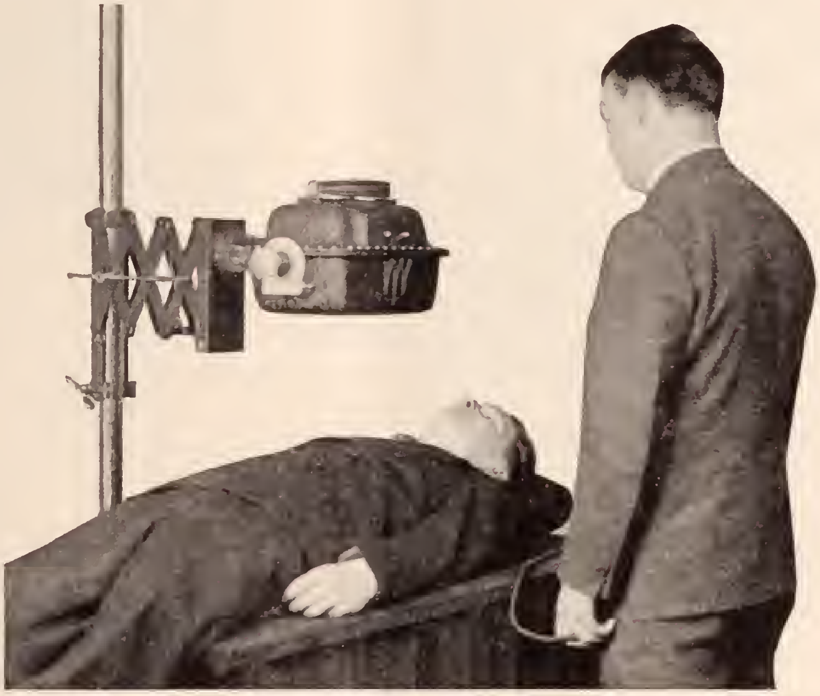

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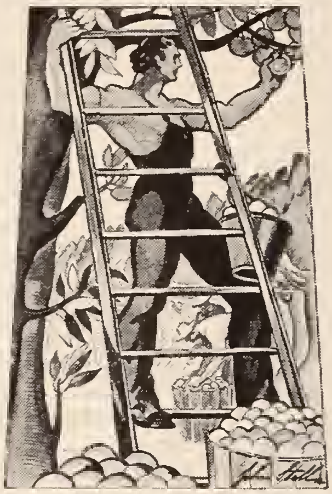

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* "Lobar Pneumonia and Serum Therapy" by Frederick T. Lord and Roderick Heffron, published by The Commonwealth Fund in 1936.

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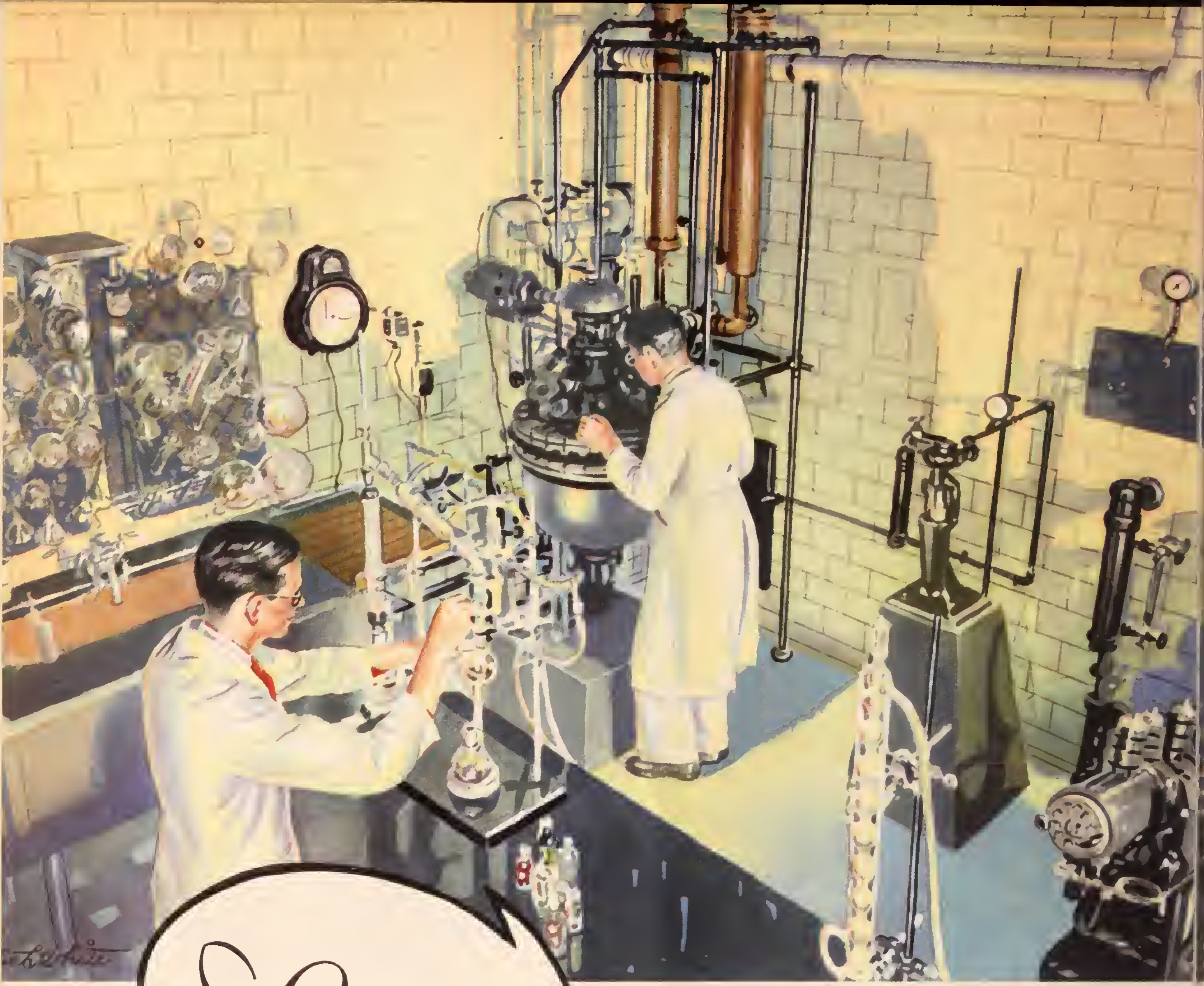

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BOOK REVIEWS

Brain Reflexes and Laws of Existence. By W. D. Hoffman, M. D., Los Angeles. Pp. 308. Los Angeles: Parkman Press. Price $10.

The author assumes without warrant that cultists are making inroads in medical practice by suggestive therapeutic methods. That this is so because physicians do not know the principle of the mechanics of the brain and nervous-tissue activity. Hence this text. This premise is not warranted.

However, the author has, from his experience, written in a pleasing way on psychology, psychotherapy, and psycho-analysis. One may broaden his views, gain new insights and be aided in better understanding of patients by studying this text.

Modern Treatment of the Respiratory System. By A. Lisle Punch M. D., England, and F. A. Knott, M. D., University of London. Pp. 295. P. Blakiston's Son and Company, Inc. Price, $5.

The personal views and experiences of the authors are presented on respiratory disease and infection. Numerous x-ray illustrations amplify the text. An English viewpoint is well imparted and consistent with accepted practices.

Oral Diagnosis and Treatment Planning. By Kurt H. Thoma, D. M. D., and Charles A. Brackett, Professor of Oral Pathology in Harvard University; Oral Surgeon to the Brooks Hospital; Consulting Oral Surgeon to the New England Baptist Hospital; Consulting Oral Surgeon to the Tumor Clinic of Beth Israel Hospital. Pp. 379, with 533 illustrations, 71 of them in colors. Philadelphia and London: W. B. Saunders Company. 1936. Cloth, $6 net.

This is a much needed text. It will enable every practitioner to become more capable in interpreting what he sees while examining a mouth. This volume covers the diseases and abnormal conditions of the teeth, jaws and other organs and tissues of the mouth. Primary and sec-

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BOOK REVIEWS

(Continued from Preceding Page)

ondary manifestations that are symptoms of other conditions are presented in an instructive manner. Methods of examination are described.

Research in Dementia Praecox. By Nolan D. C. Lewis, M. D. Pp. 320. Committee on National Mental Hygiene, New York City. Price, $1.50.

This book is intended to stimulate interest in dementia praecox research, and is sponsored by the Masonic Order. The text presents what is being done in the research field.

The Legal Aspects of Milk Control. By James A. Tobey, Dr. P. H. International Association of Milk Dealers, Chicago.

A reference manual on court decisions on legal aspects of the control of milk.

TWENTY-FIVE YEARS AGO

(Continued from Text Page 448)

success, and there are but few men who can afford to have these failures. On the other hand, at times there will be success when nothing else in the world has been of value. For example, I had a case in one of the London hospitals of the most pronounced tetany. . . .

Dr. Victor Vecki, San Francisco: I have tried hypnotism a number of times, but I have never succeeded in hypnotizing anybody. About thirty years ago I witnessed Urbantschich of Vienna hypnotize several hysterical subjects whom he had brought to a meeting of the Polyclinic, and I have seen the former assistant of Bamberger in Vienna, Doctor Kanders, hypnotize many subjects. I have tried to do this very often. I have bought all kinds of apparatus, things that whirl around before the eyes of the patient, but I never succeeded. . . .

From an article on "Case of Acute Mercurial Poisoning Followed by General Necrosis of Maxillary Bones, and Purulent Otitis Media" by M. Herzstein, M.D., and A. B. Baer, M.D.

On December 3 Mrs. E., 28 years of age, drank a solution containing six 7½-grain HgC. tablets. She vomited freely within five minutes and had her stomach washed at the end of thirty minutes and in the interim drank the whites of half a dozen eggs and two glasses of sweet oil. At the end of an hour she became unconscious and was removed to the hospital. Urine voided by catheter for first time at the end of sixty-two hours. Unable to take nourishment except by rectum, as everything taken by mouth was immediately expelled by vomiting. . . .

California Academy of Medicine.—The regular monthly meeting of the California Academy of Medicine was held in the library of the San Francisco County Medical Society on Monday evening, September 25, 1911, President Ebright in the chair. . . .

The ancient belief that both disease and cure were of divine origin, and the fact that the healing art was practiced to a large degree by the priesthood, have left a permanent stamp upon medical terminology. So the word "plague," according to derivation, means "blow" or "stroke" and implies that the epidemic is an expression of the wrath of angered gods.—Mack.

●

VITAMINS IN CANNED FOODS

V. VITAMIN G

● By 1926, it was apparent that the antineuritic vitamin B of earlier investigators was in reality a combination of several vitamins. In that year, Goldberger postulated the existence of a second vitamin associated with the so-called vitamin B "complex" which he designated as the P-P or pellagra-preventive factor. Evidence has been offered that this factor—subsequently named vitamin G—exerts a specific action in the cure and prevention of human pellagra and a similar condition in experimental animals (1).

Since Goldberger's pronouncement, considerable research has been devoted to resolution of the vitamin B complex and, what is equally important, to testing the specificity of vitamin G in the cure of human pellagra (2).

The findings in the laboratory and clinic have not, in some respects, been entirely in accord (3).

As reports of further investigations appeared in the literature, it became clear that the vitamin B complex had been aptly named. At one time claims were made for the existence of as many as eight factors in this complex (4).

While later work has reduced this number, we know today that what has been considered in the past as vitamin G is, in reality, a combination of several factors. A relation between experimental cataract and vitamin G has been described and, recently, another associated factor was postulated (5).

The significance of these individual factors in human nutrition has not as yet been established. However, regardless of this fact, students of nutrition are agreed that we must provide for the inclusion of so-called vitamin G—admittedly a complex—in the daily dietary. It is also obvious that until more is known about the individual components of the complex, we must continue to depend upon present day bioassay methods to determine the "vitamin G" potencies of foods.

In this connection, many canned foods have been found by comparative studies to retain their original vitamin G potencies as measured by methods now in common use (6).

Investigators in the U. S. Public Health Service have described their values in the control of human pellagra (7).

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(1) 1926. U.S. Pub. Health Report, *41*, 297.
(2) 1934. Am. J. Med. Sci., *187*, 512.
1935. J. Am. Med. Assoc., *104*, 1377.
(3) 1932. J. Am. Med. Assoc., *99*, 120.
(4) 1933. J. Nutrition, *6*, 559.
(5) 1934. J. Nutrition, 7, 97.
1936. Science, *83*, 17.
(6) 1932. J. Nutrition, *5*, 307.
1932. Ind. Eng. Chem., *24*, 457.
(7) 1932. J. Am. Med. Assoc., *99*, 95.

This is the eighteenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

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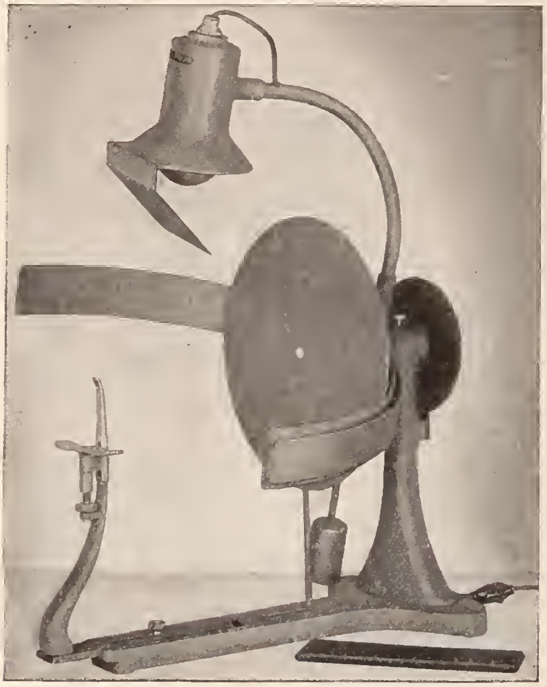

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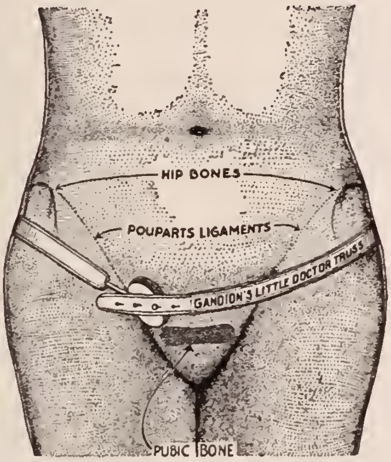

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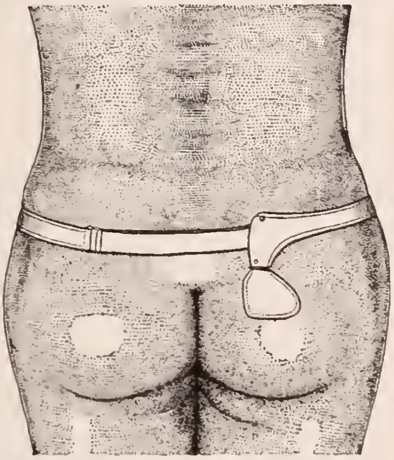

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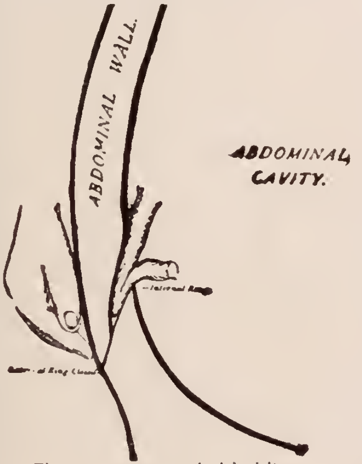

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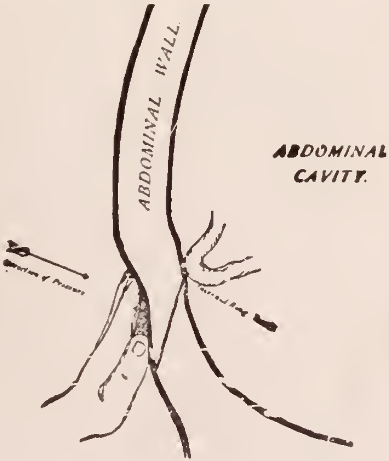

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(Continued from Text Page 448)

that the parchment was the license of a reputable Seattle physician, whose name was withheld from the trial record by the prosecution. De Gaston testified he posed as this doctor. In San Francisco, when he operated for the ring there, the license of a San Francisco surgeon was on the wall of his office, De Gaston testified. How the licenses were obtained for De Gaston was not disclosed. De Gaston also testified that questionnaires were given to women patients to be filled out with their names, addresses, telephone numbers, and other information. As De Gaston testified, the actor was watched closely by two of the defendants, R. L. Rankin, former tax expert and asserted 'business brains' of the Syndicate, and by William Byrne, former inspector for State Medical Board in Los Angeles. . . . Rankin and Byrne were in court under guard, having been placed in custody and ordered held in jail by Judge Crum yesterday for the duration of the trial. . . ." (Los Angeles *Herald-Express,* October 9, 1936.)

" . . . In his closing testimony De Gaston said that R. L. Rankin, one of the defendants, told him while he was practicing in Seattle that he should get in touch with the Medical Board investigator there and arrange to pay him off indirectly by making him a stockholder in the Medical Acceptance Corporation." (Los Angeles *Times,* October 10, 1936.)

" . . . De Gaston said another defendant, William Byrne, former California Board investigator, came to Seattle and failed in an attempt to get Harry Huse, State Director of Medical Licenses in Washington, to join the asserted ring. Although not licensed as a physician, De Gaston testified that he opened branches of the alleged ring in Seattle and San Francisco, using licenses given him by Rankin, made out in the name of 'Dr. Lee' and 'Dr. Hoch.' He said he received $750 a month." (Los Angeles *Illustrated Daily News,* October 10, 1936.)

(Continued in Back Advertising Section, Page 34)

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Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154
N. Y. State Jour. Med., June 1935, Vol. 35, No. 11
Arch. Otolaryngology, Mar. 1936, Vol. 23, No. 3, 306-309

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OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION

VOL. 45 NOVEMBER, 1936 NO. 5

California and Western Medicine

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Address editorial communications to Dr. George H. Kress as per address above; advertising and business communications to Secretary-Treasurer, Dr. Frederick C. Warnshuis, also at above address.

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Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

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EDITORIALS[†]

"SAN FERNANDO PLAN" OF LOS ANGELES COUNTY*: ITS EFFICIENCY IN THE OUT-PATIENT MEDICAL CARE OF INDIGENT CITIZENS

How the "San Fernando Plan" for Outpatients Came Into Existence.—From time to time during the last three years, CALIFORNIA AND WESTERN MEDICINE has presented editorial and other comment upon a new experiment, inaugurated in 1933 by the County of Los Angeles, whereby, under authority of the Board of Supervisors, out-patient medical care was given to indigent citizens in the private offices of physicians. First tried out in the San Fernando Valley, this so-called "San Fernando Plan" has served a territory including nine districts not a part of the metropolitan area of Los Angeles County.

In 1924, the County Health Department started its first "Health and Welfare Center," and soon nine such headquarters were instituted, each provided with a modern building adapted not only for preventive, but also with limited curative facilities. Prior to that time, ambulatory patients of these districts went for care to the out-patient service of the Los Angeles County Hospital, or to medical school and other dispensaries.

* * *

The Protest Against the County Health Department's Health Centers.—At the end of several years, however, the manner in which these "Health Centers" were administered by the County Health Department provoked protests from local physicians who had been invited to give gratuitous service in the attached clinics; and, as a consequence, based on a legal opinion rendered by the County Counsel in June, 1932, the curative clinics were again placed under the jurisdiction of the Los Angeles County Hospital.

* * *

The Proposal Made by Physicians of the San Fernando District.—Meanwhile, members of the medical profession in the San Fernando district having found the clinic work onerous, since many indigent patients used the kindly health-center building as a sort of social and gossiping center, a proposition was, therefore, made to the County Board of Supervisors that treatment no longer be given in hospitals, but in the offices of the physicians. On August 1, 1933, this new method was inaugurated at San Fernando, for a ninety-day trial; and on its recognition as a seeming improvement, it took on a more expanded and permanent form, six of the remaining districts also coming under its regulations. In this new method, physicians were compensated (supposedly for the use of office and equipment) at the rate of 50 cents for each office visit, while for home visits a rate of $1.50 plus mileage was allowed. In 1934, it was estimated that the average cost per office call was $1.236, and a year later, in December, 1935, the county paid to physicians a total of $38,782 to cover 22,951 office calls and 1,796 trips to patients' homes.

[†] Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column, which follows.

* Articles on the San Fernando plan were printed in CALIFORNIA AND WESTERN MEDICINE, as follows: Issue of December, 1933, on page 417; January, 1935, on page 16.

* * *

A Recent Survey of the San Fernando Plan. Attention is again called to the San Fernando plan, not only because of the publicity given to it within and without the state, but also since the Department of Budget and Research of the County of Los Angeles has just brought off the press a report of 200 pages dealing largely with the scheme's workings. In this report it is estimated that an annual saving of something like $153,748 could be made, if certain modifications of the plan were instituted. The present annual cost of $621,308, for example, is divided between $355,308 for administrative personnel and an estimated $266,000 for office treatments; whereas it is believed that a saving of $20,748 would result on administrative personnel, and quite $133,000 on office treatments.

This lesser estimated cost of office treatments is based on a proposed method to greatly reduce the number of physicians on San Fernando panels, thus practically approximating full-time medical employees to give treatments in the health centers, or in emergency work, or in house visitations. The report also expresses the opinion that the San Fernando plan, as conducted in the past, is in violation of the county charter, the Research Department critics contending that panel physicians should be civil service employees.

Whatever one thinks of the foregoing propositions, some of the other suggestions of the Department of Research and Budget are of merit, and might well be adopted, although, for lack of space, they will not be discussed here.

* * *

Is the San Fernando Plan, as Now in Operation, or Modified as Proposed, Desirable?—To most physicians, the question must naturally arise as to whether it is wise to publicize treatment plans incorporating a compensation table of fifty cents per office visit. Many laymen, upon learning of such a rate, are apt to draw the conclusion that adequate and scientific medical service can be economically rendered by physicians on that basis, forgetting that in all such plans as the San Fernando, the physicians in attendance, who also have private practice, must necessarily donate of both their office facilities, and their time and services, at that lower rate of pay.

In other words, is not such publicity a detriment to established scientific practice in medicine, and, if so, would it not be a wiser plan to have all curative work carried on under the immediate jurisdiction of the parent institution, the Los Angeles County Hospital, and through its full-time, salaried medical personnel? In the long run, which is the better method?

The study of the Department of Budget and Research is a valuable report, and should receive due and careful consideration by all the interests involved.

ON HOSPITAL SERVICE IN THE UNITED STATES

Why Hospital Surveys Are of Interest.—Just when plans for hospitalization and medical service, operating under the sponsorship of physicians and hospitals and to the number of more than two hundred, are being thoroughly tested in different parts of the United States, and when, at the same time, lay and political propagandists are continuing throughout the Union their efforts to bring about the enactment of laws that would lay the foundation for compulsory health insurance and state medicine, it may not be out of place to review some of the facts having to do with hospital service in the United States.

Fortunately, accurate statistics on hospital standards and facilities are available, the American College of Surgeons having started its surveys in 1918, and the Council on Medical Education and Hospitals of the American Medical Association in 1921—the College having for the year 1935 an "approved" group of 2,266 out of 3,565 institutions surveyed in the United States and Canada, and the American Medical Association placing 6,246 hospitals, located in the United States, on its "registered" list; 564 institutions (representing 1 per cent of the total capacity of all hospitals) having been refused such registration recognition.

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American Medical Association Standards for Hospital Registration.—Among such registration stipulations laid down by the American Medical Association are the following:

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>
> Regardless of the form of organization, the hospital should function primarily in the interests of the sick and injured of the community. . . .
>
> *Pathology.*—All tissues removed in the operating room should be examined, described, and diagnosed by a competent pathologist, excepting tissues such as tonsils and teeth, in which the pathologic changes are quite obvious.
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> A physician-pathologist should be employed on a full-time or part-time basis. When this is not practicable, arrangements should be made with a consulting pathologist for tissue-diagnosis, postmortem work and the interpretation of the more complicated tests and determinations in

clinical and surgical pathology, as well as in general clinical laboratory work. The pathologist preferably should be one listed by the Council on Medical Education and Hospitals of the American Medical Association. . . .

Autopsies.—Every effort should be made to secure consent for autopsies, which should be performed by a pathologist or the best qualified other physician available.

Radiology.—The hospital should provide or have ready access to radiologic equipment and service. When a full-time or part-time physician roentgenologist cannot be employed, the services of such a consultant should be secured. Radiologic interpretations must be made only by a competent roentgenologist. A description of the roentgenologic examinations should be placed in the patient's chart. The physician-roentgenologist preferably should be one listed by the Council on Medical Education and Hospitals of the American Medical Association. . . .

Ethics.—In order that a hospital may be eligible for registration it will, of course, be expected that the staff and management conform to the principles of medical ethics of the American Medical Association with regard to advertising, commissions, division of fees, secret remedies, extravagant claims, overcommercialization, and in all other respects.

* * *

Minimum Standards of American College of Surgeons.—The American College of Surgeons has somewhat similar standards, among which are these:

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word *staff* is here defined as the group of doctors who practice in the hospital, inclusive of all groups such as the "regular staff," the "visiting staff," and the "associate staff."
2. That membership upon the staff be restricted to physicians and surgeons who are (*a*) full graduates of medicine in good standing and legally licensed to practice in their respective states or provinces, (*b*) competent in their respective fields, and (*c*) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.
3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital. . . .
4. That accurate and complete records be written for all patients and filed in an accessible manner in the hospital. . . .
5. That diagnostic and therapeutic facilities under competent supervision be available for the study, diagnosis, and treatment of patients, these to include at least (*a*) a clinical laboratory providing chemical, bacteriological, serological, and pathological services, and (*b*) an x-ray department providing radiographic and fluoroscopic services.
6. That there shall be a properly organized nursing department under competent supervision and direction for the administration of the nursing service.

* * *

Annual Surveys an Incentive to Hospital Improvement.—A perusal of the above requirements, laid down by the two organizations—the American Medical Association and American College of Surgeons—which have been largely responsible for the phenomenal betterment of standards that has taken place in American hospitals during the last twenty years, reveals the phases of hospital service particularly stressed.

Today, members of the medical profession and patients alike expect to find hospitals measuring up to the standards established during the last two decades; and it may be affirmed that these two professional and lay groups are not satisfied with anything less.

Hospitals, in one sense, are high-class hotels catering to sick and injured persons, and possessing administrative, medical, nursing and other services and facilities, by means of which the attending physician is enabled to supervise the care of his patients with greater efficiency, and through which such patients are given a far better chance for earlier restoration of health than would be possible in the ordinary home.

* * *

Hospital Data of the American Medical Association Council on Hospitals.—The 6,246 hospitals have 1,076,350 beds and 53,310 bassinets, the average number of beds not used being 199,661, of which latter number 144,880 were credited to "general hospitals."

These general hospitals accepted 6,867,870 patients, or 89.07 per cent of the 7,709,942 patients admitted to all hospitals. . . . The average length of stay per patient in general hospitals was fourteen days. . . . There are 4,364 hospitals that have their own laboratories, 3,115 of which are directed by physicians, while 275 registered have nurses for directors. . . . Roentgen-ray departments were reported by 4,698 hospitals, with 3,686 physician-directors and 278 nurse-directors.

California is credited with 368 registered hospitals, 64,315 beds and 3,602 bassinets, and a total of 487,433 admissions, with an average census of 53,895.

California also has twenty federal hospitals, with 1,831 beds; sixteen state hospitals, with 21,326 beds; sixty-one county hospitals, with 17,339 beds; one city hospital, with ninety beds, and three city-county hospitals, with 2,174 beds; making a total of 101 governmental hospitals in California alone, with 47,578 beds, of which 44,415 are practically in constant use.

The total number of nongovernmental institutions for the sick in California is divided as follows: Forty church hospitals, with 4,598 beds; five fraternal, with 675 beds; sixty-one "nonprofit corporations or associations," with 5,017 beds; these together making a total of 106 nonprofit hospitals, with 10,290 beds, of which 6,235 are ordinarily occupied. In addition, the state has 161 proprietary hospitals, with 6,447 beds, of which 3,245 are in use.

* * *

Amount of Capital Investment in the Hospitals of the United States.—It has been estimated that the registered hospitals in the United States represent a capital investment of more than three billion dollars, a sum which places hospital plant and equipment among the half-dozen major capital outlays of the Union. The per-bed investment runs from $2,500 (for chronic diseases) to $10,000 (for acute illnesses), making an average of about $5,000 per bed.

Federal and state hospitals are devoted largely to the care of mental and tuberculosis patients.

The endowment resources of nongovernmental hospitals are limited to a few institutions only, and is so inconsequential that, if distributed among all the hospitals of the country, "would provide about $0.08 per patient-day toward operating costs."

The above figures, taken from the survey reports to the American Medical Association, the American College of Surgeons and other sources, indicate what a large place hospitals have in the lives of both physicians and patients, and why proposals for hospitalization and medical service on a periodic-payment basis must give consideration to these institutions, since, necessarily, they are important elements in all such plans.

CHIROPRACTIC: A LEGAL OPINION ON ITS THERAPEUTIC SCOPE*

The Opinion Handed Down by Judge John J. Van Nostrand.—In the department for Original Articles, on page 419 of this issue of CALIFORNIA AND WESTERN MEDICINE, will be found an opinion rendered by the Honorable John J. Van Nostrand of the Superior Court of California, in and for the City and County of San Francisco, in which Citizen M. James McGranaghan, who holds himself before the public both as a chiropractor and an attorney-at law, sought to have the Court determine the diagnostic and treatment scope of his chiropractic license.

* * *

How Chiropractor McGranaghan Placed Himself on Trial.—In order to bring his case before the courts, the plaintiff, McGranaghan, alleged his license allowed him to do most of the things embraced in the practice of medicine. Chiropractor Berger intervened, claiming such a license permitted only a lesser scope of activity.

The People of the State of California, through Attorney-General U. S. Webb, also intervened, asking the court to determine, not who was right, but *what* was right.

Attorney-General Webb contended both parties sought to do more than the Chiropractic Act permitted its licentiates to do.

After a trial lasting approximately two months, during which the People's case was presented by Deputy Attorney-General Lionel Browne, the court determined neither chiropractor could perform the acts which they sought to perform. Most of the things they tried to do were held to come within the domain of medical practice.

Excerpts from the brief submitted by Attorney-General Webb and Deputy Attorneys-General Leon French and Lionel Browne are printed on page 414 of this issue.

* * *

The Decisive Nature of the Van Nostrand Opinion.—In the opinion which was handed down on September 28, 1936, Judge Van Nostrand states:

> I am not in accord with the position assumed by the plaintiff herein as to the unconstitutionality of the words "Materia Medica," for they have a well-defined and recognized meaning, and have been frequently used by the courts of this state, and consequently I hold that the chiropractor has no right to administer or prescribe drugs or medicines. . . .
>
> Such appliances or agencies as the chiropractic table, chiropractic hammer, and towels and other instrumentalities as are purely sanitary, do not violate the statute; but the use of the various therapeutic agencies, such as electrotherapy, hydrotherapy, colonic therapy, etc., are embraced in the practice of medicine and, therefore, forbidden to chiropractors.

To many readers, the opinion of the Honorable William P. James of the Superior Court of San Jose, to be found on page 142 in the February, 1934, issue of CALIFORNIA AND WESTERN MEDICINE, in a case reversed for technical reasons, may be of special interest, because of a point of view similar to that of Judge Van Nostrand.

* * *

Thirty-five Hundred California Chiropractors Also Should Be Interested.—The Chiropractic Practice Act became a law by initiative vote of the California electorate in 1922, and since that date the Chiropractic Board has licensed almost 3,500 practitioners of that cult. It is a hopeful sign that a higher court has seen fit to define the limitations of the law. It may be of interest to note to what extent chiropractors will abide thereby. It is not known, at the time of this writing, whether an appeal will be taken.

"PACIFIC COAST ABORTION RING"

A Recent Exposé.—Reference to the column assigned to the California State Board of Medical Examiners, on page 448 in this number of the Official Journal, discloses a series of newspaper items concerning what the press has styled a "tri-state illegal operations syndicate," referring to Washington, Oregon and California. The parties accused of the guilty acts, having been haled into court, are on trial before the Honorable Arthur Crum, judge of the Superior Court for the County of Los Angeles. Because of the astounding nature of the evidence which has been submitted, the case has received much mention in the newspapers.

The "syndicate" secured, among other activities, the coöperation of a former enforcement officer of the California Board of Medical Examiners, now for the time being committed to jail by the Court because of his efforts to intimidate witnesses for the State.

* * *

Brazenness of the Group.—The leaders of the syndicate, indeed, became so brazen that they even gave defiance to the California Examining Board, in the belief that the safeguards and loopholes, which their legal counselors had advised them to use in their operations, would be sufficient to protect them from attack by the State's authorities. The syndicate's plan of operation was originally conceived by a lay citizen of the State of Washington, a lumberman who went so far as to create a "Medical Acceptance Corporation" (after the style of automobile financing agencies); so that payments, with rates of interest appropriate under the circumstances, might be secured from some of the patients. So-called clinics were established in about ten of the Coast cities. The money profits are stated to have approximated an annual sum of something like one million dollars!

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* The brief submitted by Attorney-General U. S. Webb appears on page 414; the legal opinion handed down by Judge John J. Van Nostrand is given on page 419. Both articles are worthy of perusal by all licentiates.

A perusal of the newspaper items in the State Board column reveals the sordidness of the entire business. The jury's decision in the premises will be of interest. Present indications point to a long and bitter battle in the courts.*

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 430.

EDITORIAL COMMENT†

VENOUS PRESSURE

Determination of the venous blood pressure is at times of great value. In congestive failure, associated with failure of the right side of the heart, one of the first signs is increased pressure in the systemic or peripheral veins. Obstruction to a vein or venous channel will cause the pressure to increase distal to the site of the obstruction.

There are four fundamental factors affecting peripheral venous pressure, namely, (1) heart action, (2) intrathoracic pressure, (3) hydrostatic level, and (4) volume of blood in the vein.

Edema and the accumulation of serous fluid occasionally offer diagnostic problems. Determination of the venous pressure and estimation of the blood-plasma-proteins (indirect estimation of the approximate osmotic pressure of the blood) are usually of great help in the differential diagnosis between congestive heart failure, venous obstruction, and the edema of renal disease, depleted nutritional states, blood-loss and certain other metabolic disturbances.

There are two methods for determining venous blood pressure: (1) direct, and (2) indirect. The direct method is based upon a direct measurement of the pressure within a vein by means of a manometer connected with a needle or cannula introduced into the vessel. The indirect method depends upon the external pressure necessary to collapse a vein. The direct method should be chosen when reasonably accurate readings are required or when there is difficulty in obtaining a prominent pliable external vein. The vein chosen and zero level of the manometer tube should be horizontal to the mid-axillary line. This is approximately the level of the right auricle in the normal chest, with the patient in the recumbent position. This can be accomplished by using a long spirit level. The heart has been questioned as the point from which the hydrostatic factor in venous pressure is measured. However, for clinical purposes it is necessary to have a more or less fixed point or landmark to serve as, at least, a hypothetical zero level. The patient should rest in recumbency for at least fifteen minutes before the test. The manometer tube should have a bore not smaller than 4 millimeters. In the direct method a needle of 18 gauge is sufficient, and sterile aqueous solution of 2 per cent sodium citrate can be used to fill the small Kaufman-Luer syringe, rubber tubing and manometer to the level which is assumed to be the approximate pressure. All air should be excluded, and the plunger of the two-way syringe pushed in to the closed position. The needle is introduced well into the lumen of the vein. The plunger of the syringe is then withdrawn to the sidearm of the syringe, allowing the blood stream to be in direct contact with the manometer tube.

In patients suffering from congestive heart failure it is not uncommon to obtain readings of from 20 to 30 centimeters and occasionally even higher by the direct method described. Under normal conditions of tissue resistance, capillary permeability and osmotic pressure, the edema level of the venous pressure, as measured in one of the large superficial veins of the flexor surface of the elbow, is from 16 to 18 centimeters of the citrate solution. The normal pressure in this vein varies from 4 to 12 centimeters.

The pressure in the venule loop of capillaries is the most important factor in the production of edema of cardiac origin. This venule pressure is difficult to obtain, and at the present time it is not practical to obtain this reading for routine clinical use. The venule pressure is greater, but parallels the venous pressure in rise or fall.

Some clinicians obtain a rough estimation of the venous pressure by observing the level above the heart at which the superficial veins of the hand will collapse.

Serial determinations of the venous blood pressure are of great value in estimating the response of a patient suffering from congestive failure of the right side of the heart.

University of California Hospital.

Dudley W. Bennett,
San Francisco.

DETERMINATION OF BLOOD VELOCITY BY THE SODIUM DEHYDROCHOLATE METHOD

There are available four principal methods for the estimation of the speed of blood-flow in humans. These are: (*a*) The radium method of Blumgart,[1] in which radium emanation is injected intravenously and its arrival in any given part of the circulation is recorded by a radium-sensitive instrument. This method has the particular value of providing means for estimating separately the speed of the flow of blood through the lungs and through the peripheral vascular area; (*b*) the cyanid method of Robb and Weiss,[2] in which sodium cyanid is injected intravenously and its arrival at the carotid sinus is marked by a sudden increase in rate and depth of respiration; (*c*) the dye (vital red) method of Hamilton,[3] in which arm-to-femoral circulation time is measured by injecting the dye in an arm vein and collecting samples of blood by puncture from the femoral artery; (*d*) the sodium dehydrocholate method of Winternitz,[4] which depends for its measurement of the blood flow on the time taken for the bitter-tasting bile salt to reach the tongue after injection into one of the antecubital veins.

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* Editor's Note.—The trial came to a sudden end and the jury found eleven defendants guilty. A newspaper item on page 440 gives additional information concerning the penitentiary sentences imposed by the Court.

† This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

1. Blumgart, H. L., Gargill, S. L., and Gilligan, D. R.: Studies on the Velocity of Blood Flow, J. Clin. Investigation, 9:69 (Aug.), 1930.
—The Velocity of Blood Flow in Health and Disease, Medicine, 10:1 (Feb.), 1931.

The latter method is the simplest, safest and most readily available. It is highly accurate in comparison with more elaborate methods. In contrast with the above mentioned techniques, the sodium dehydrocholate method requires the coöperation of the patient in establishing the end-point.

Recent investigations[1, 5] have shown that the rate of blood flow is slowed in myxedema, polycythemia vera and in congestive cardiac failure, and is accelerated in anemia and in hyperthyroidism, but not when the metabolic rate is elevated with dinitrophenol[6]).

The blood velocity is determined by injecting 5 cubic centimeters of the 20 per cent solution of sodium dehydrocholate rapidly into one of the veins of the cubital fossa. The time between the beginning of the injection and the appearance of a bitter taste in the mouth is recorded with a stopwatch and gives one the arm-to-tongue circulatory time. Sixteen gauge needles are used and the determinations are always done in duplicate. Not more than one or two seconds should be taken in delivering the 5 cubic centimeters of testing fluid into the vein. The normal blood velocity, as measured by the above technique, is from 10 to 16 seconds, the average being 13. Duplicate determinations usually check to within one second. The test should be done with the patient in a basal condition, as for a determination of the basal metabolic rate.

450 Sutter Street.

Harold Rosenblum,
San Francisco.

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2. Robb, G. P., and Weiss, S.: A Method for the Measurement of the Velocity of the Pulmonary and Peripheral Venous Blood Flow in Man, Am. Heart J., 8:650, 1933.

3. Moore, J. W., Hamilton, W. F., Kinsman, J. M., and Spurling, R. G.: Studies on the Circulation; description of the Injection Method of Studying the Circulation, with Some Clinical Applications, South. M. J., 23:1131, 1930.

4. Winternitz, M., Deutsch, J., and Brüll, Z.: Eine klinische brauchbare Bestimmungsmethode der Blutumlaufszeit mittels Dekolin-injektion, Med. Klin. 27:986 (July 3), 1931; 28:831 (June 10), 1932.

5. Tarr, L., Oppenheimer, B. S., and Sager, R. V.: The Circulation Time in Various Clinical Conditions Determined by the Use of Sodium Dehydrocholate, Am. Heart J., 8:766 (Aug.), 1933.
—Gargill, S. L.: The Use of Sodium Dehydrocholate as a Clinical Test of the Velocity of Blood Flow, New England J. Med., 209:1089 (Nov. 30), 1933.

6. Rosenblum, Harold: Rate of Blood Flow in Patients Receiving Dinitrophenol, J. A. M. A., 104:1592-1594 (May), 1935.

ORIGINAL ARTICLES

INJECTION TREATMENT OF HERNIA: ITS EXPERIMENTAL BASIS*†

By Franklin I. Harris, M.D.
and
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In the past few years much interest has been aroused in the possibilities of treating hernia by a nonoperative method. Despite the fact that thousands of cases of hernia have been and are being treated by a method of injection, there has been very little scientifically conducted investigation to determine the value or dangers of such a method of treatment.

HISTORICAL BACKGROUND OF INJECTION TREATMENT

A study of the historical development of this subject and an analysis of the work which has been done by various investigators may explain the prejudice against this form of therapy. Since its first introduction by George Heaton in 1832, it has been alternately advocated and condemned. A study of the papers which have appeared on this subject reveals independent attempts by different investigators who have failed to base their work upon the experience of men who have preceded them. Perhaps it is this lack of correlation, this failure to build upon the experience of others, which has prevented the popularization of this treatment. Previous reports show an amazing lack of critical analysis, a failure to evaluate statistically the results of the treatment. The criticisms of the opponents of the method led not to a more careful evaluation of results, but rather to an exaggeration of claims which, in the first place perhaps, were extravagant.

HEATON'S CLAIMS

Following Heaton's claim of 100 per cent cures in his private practice, the American Medical Association sent a committee requesting information about his work; this he refused to give. This failure to reveal his exact technique to the medical profession brought him and the method much justifiable criticism. His results, which were finally published in 1843, reveal a complete lack of critical analysis and statistical interpretation. He states in his book that all of his patients were cured; but from comments and criticisms of contemporary men it seems apparent that he was successful in only about 75 per cent of his cases. Little additional work was done in this country in the succeeding few years, although Bigelow, in 1850, and Watson, in 1851, published single articles. Owing to the prejudice with which Heaton's work was received, he spent little time in introducing it in this country. On a European trip, however, he demonstrated his work in England, France and Germany, and subsequent articles in the foreign literature appeared as a result of his teaching. Little advance was made in this form of therapy until about 1880, when Warren and DeGarmo attempted to popularize Heaton's technique. Largely on the basis of their work, renewed interest was shown in Europe. Schwalbe and Steffen in Germany, and Lannelongue in France, were the principal proponents.

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* From the Department of Surgery and Pathology, Mount Zion Hospital, San Francisco. Services of Dr. Harold Brunn and Dr. G. Y. Rusk.
Read before the General Surgery Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

† Discussion of the three papers on the Injection Treatment of Hernia appears on page 395.

PINA MESTRE'S WORK

In 1910 there appeared some work by Pina Mestre of Barcelona, Spain, which marked the introduction of the modern scientific conception of this subject. The criticisms, dangers, complications, and results of the old method do not in any sense apply to the injection treatment as now proposed and advocated. The discussion of caustic solutions, such as iodin, tincture of cantharides, extract of white-oak bark, alcohol, and carbolic acid, which were previously used, and the untoward reactions and occasional fatalities of previous investigators and a discussion of the paraffin injection treatment of the latter part of the nineteenth century, do not form a part of an analysis of the modern method. The necrosis and sloughing, the atrophy of the testes, fecal fistula, peritonitis and failure to cure, occasionally experienced by investigators using the old method, are not a part of the experience which has been found with the injection method of today.

OTHER STUDIES AND REPORTS

In the last few years able surgeons have quietly and cautiously investigated the possibilities of this technique. Reports are beginning to appear in the English and European, as well as in the American literature, of the successful treatment of thousands of cases, with good follow-ups and without any untoward results.[1,2,3] However, up to the present time there is still lacking an adequate presentation of the pathologic and histologic background, of statistical results and of an anatomical basis of the method. It has been our purpose to present a rationale of treatment based on anatomic and pathologic studies, and to study a carefully followed group of cases. We further propose to present a finished technique and to determine the contraindications and dangers of the method. In order to understand properly the rationale of such a method of treatment, one must for the moment briefly review the mechanism of the ordinary inguinal hernia.

MECHANISM OF HERNIA

An understanding of the anatomical relationships of the muscles, fascial layers and hernial sac in the indirect inguinal type of hernia is absolutely essential. The hernial sac, as is known, enters the inguinal canal through the internal ring and passes downward in the canal beneath the transversalis and internal oblique muscle. In the medial third of the canal it emerges from beneath the lower edge of the internal oblique muscle and lies then deep to the external oblique muscle. Deep to the sac lies the transversalis fascia. If external pressure be applied over the inguinal canal so as to approximate these muscle layers, the contents of the sac are unable to descend. This is often seen clinically in patients who exert pressure over the inguinal canal when sneezing or coughing. In other words, the hernia does not become clinically apparent until the contents of the sac descend within the sac itself. It is obvious that there must be a sufficient separation of the external and internal oblique muscles from the transversalis fascia to allow for the distention of the inguinal canal by the contents of the sac. If, then, by any means we can prevent the external oblique from separating from the underlying muscles, the hernia will never descend despite the existence of a sac. This is exactly the result obtained by the injection into this region of a solution which produces fibrosis. Such fibrosis obliterates the patency of the inguinal canal by producing an intimate adherence of the muscle layers in this region in a manner almost identical to that accomplished by the suturing of the surgical procedure.

SOLUTIONS FOR INJECTIONS

The solution to be used for the injection is our next consideration. The various solutions used in the past were unsatisfactory, as they produced too severe a form of inflammation in the inguinal canal. As the inflammation subsided, adhesions were formed which bound together the muscles constituting the inguinal canal and obliterated it by dense scar tissue. An inflammatory reaction sufficient to produce this result, however, carried with it a danger of untoward systemic reactions and local sloughs. The solutions used in the past based on such a principle were strong caustics such as phenol, iodin, and others mentioned above.

The principle underlying the more modern solutions is entirely different.[4] The solutions are relatively nonirritating, do not produce a severe inflammatory reaction and they appear to be noninjurious to tissue. They produce no systemic reaction from their absorption and are relatively nontoxic if mistakenly injected intravenously. Furthermore, they produce no peritoneal inflammation if through errors in technique they are injected into the peritoneal cavity. By experimental work and clinical results the modern solutions have proved to produce a predominance of the proliferative phase of the inflammation resulting in fibroblastic formation with the minimum of the exudative stage.

EXPERIMENTS WITH THREE TYPES OF SOLUTIONS

In this series three preparations have been used; the first two are alcoholic solutions of tannic acid, examples of which are the commercial preparations Pina Mestre Solution and Proliferol, and the third is a five per cent sodium salt of the fatty acids of oil of psyllium, the commercial preparation being known as Sylasol.

Before these solutions were used on patients a series of experiments with animals was made; first, to study the nature of the response of the tissues to the injected solution, and, second, to demonstrate the amount of fibrous tissue produced.

Identical experiments were run on each of the three solutions under discussion. Normal guinea pigs were injected with each solution in the thigh muscles at varying intervals. The solution was injected throughout the entire muscle of the thigh in order to give uniform infiltration. The specimens were obtained by disarticulation of the leg at the hip, and the entire leg fixed in formalin. Sections were then obtained and stained with hemotoxylin and eosin and modified Masson's stain. One-half cubic centimeter of each solution was used and sections were taken at 6 and 24-hour intervals, and at 7, 14, 26, and 75-day intervals. Generally speaking, the tissue response to these three different solutions was practically identical and a description of one will suffice for all.

At six hours there is a zone of marked polymorphonuclear infiltration associated with interstitial edema. The muscle fibers are fragmented, slightly irregular in size and shape, and have lost some of their finer structural details. Occasional small mononuclear cells accompany the polymorphonuclear neutrophils.

At twenty-four hours scattered regions show marked interstitial edema and polymorphonuclear leukocytic infiltration. Mononuclear cells are also present. Some muscle fibers have undergone hyalin alteration of the sarcoplasm.

Examination of the seven-day section reveals an inflammatory reaction in the connective tissue septa and the fat between the muscle bundles with little further alteration of the muscle fibers. Large undifferentiated mononuclear cells replace the fat and connective tissue. The polymorphonuclear neutrophils have disappeared, and a few lymphocytes and plasma cells are present. These undifferentiated cells ultimately become fibroblasts.

At fourteen days there is a proliferation of edematous fibrous tissue separating and replacing the slightly distorted muscle fibers. This fibrous tissue is present in large masses, and special stains reveal permanent collagenous fibrils. In this fibrous tissue are a few scattered mononuclear cells and lymphocytes. The muscle fibers in the zone of reaction are irregular in shape and have lost the transverse striations.

Section at twenty-six days shows the fibrous tissue to be more compact, due to the increase of collagen, and the fibrous bands are seen extending between the muscle fibers. Groups of small vessels and nerves are surrounded by the proliferating fibrous tissue. Undifferentiated mononuclear cells are present around small vascular channels.

By seventy-five days the fibrous tissue is seen in very compact bands which are separated by a slightly edematous tissue containing foci of phagocytic and mononuclear cells.

RECAPITULATION ON STUDIES

To recapitulate, an attempt has been made to simulate and study the reaction that probably occurs in human subjects. By sacrificing animals at varying intervals following injection, a composition picture was obtained. The primary cellular response to the solution is a purely leukocytic infiltration, which is shown at the six-hour specimen. By twenty-four hours there has been an introduction of the mononuclear elements which from that time on distinctly predominate. Marked edema is present in both the six and twenty-four-hour specimens. The reaction in general shows the superficial part of the muscle bundles to be involved with a slight destruction of the fibrillae of individual fibers. After twenty-four hours the cellular reaction proceeds, with the large undifferentiated cells progressing toward spindle shapes and then typical fibroblasts with collagen formation. The undifferentiated cells may remain scattered throughout and slowly disappear. Some take on phagocytic activities and hold hemosiderin. They are usually present around blood vessels, some probably differentiate toward endothelial cells and form the numerous capillaries in the proliferating fibrous tissue. The fibrous tissue is very edematous at first, with rare collagen fibrils between the star-shaped cells. As the lesion progresses it tends to form whorls and bands, composed of the typical spindle-shaped fibroblasts which are separated by well-formed collagen. Polymorphonuclear leukocytes are not encountered in the inflammatory reaction after twenty-four hours, but lymphocytes and plasma cells are usually noted. Hemosiderin increases in quantity as the lesion grows older. In the early lesions there is marked dilatation and engorgement of the capillaries. The main mass of proliferating fibrous tissue is usually present in the connective tissue septa and fat adjacent to the large muscle bundle, with only moderate replacement of the muscle. Nerves are frequently surrounded by this fibrous tissue.

COMMENT

To summarize, these solutions provoke an immediate polymorphonuclear leukocytic response of short duration, followed by a gradually increasing reaction from the mononuclear mesenchymal elements which finally differentiate into spindle-cell fibroblasts resulting in marked fibrosis. Such a production of scar tissue without tissue damage demonstrable is exactly our clinical objective.

An attempt was also made to determine the reaction of these solutions when placed within the peritoneal cavity. Guinea pigs were injected with varying amounts of solution in dosages relatively much greater than those which would ever be used in a human subject. Normal guinea pigs were injected with one-half cubic centimeter and one cubic centimeter of these solutions intraperitoneally and examinations made six, twenty-four, and seventy-two hours and seven and fourteen days following the injection. Microscopic examination with all three solutions show an occasional small amount of clear fluid in the peritoneal cavity, with no evidence of adhesions. Microscopic examination of the peritoneum and abdominal organs was entirely negative except for slight swelling of the mesothelial cells lining the peritoneum in the six- and twenty-four-hour specimens and slight subperitoneal fibrosis in the older specimens.

Theoretically, then, if one is able to produce a proliferation of new fibroblastic tissue into the inguinal canal by the injection of non-injurious solutions such tissue can be so placed as to obliterate the inguinal canal. To prevent destruction of this newly formed connective tissue by distention of the canal brought about by frequent descent of the sac contents, it is essential during the process of active treatment that constant external pressure be maintained over the muscles of the inguinal region. This can be easily accomplished by the use of a satisfactory truss. Such a truss must keep the sac contents completely and constantly reduced during the entire active period of treatment in order to give the newly formed connective tissue in the region of the inguinal canal time to firmly and strongly organize.

TRUSSES

The truss which has been found to be most satisfactory is that of the semi-rigid type with low counter pressure posteriorly over the buttock and a sponge rubber pad anatomically fitted to the inguinal canal. The right angle counter pressure with the lower fulcrum over the buttock is an extremely important factor, inasmuch as it directs the pressure through the pad and through the inguinal canal at right angles to the axis of the canal. The truss is so adjusted as to place the encircling band halfway between the crest of the ilium and the trochanter of the femur. This neutral point is above the active muscles of the thigh and below those of the abdomen. The correct placing of this encircling band together with the anatomically correct pad, and the additional support and counter pressure of the low posterior fulcrum, give an extremely satisfactory truss with the maximum of comfort to the patient and a minimum of harness. The muscles of the inguinal canal, whether in a direct or an indirect hernia, are completely held in approximation, thus completely closing the canal and maintaining the reduction of the hernia.

Variations of this type of truss are available and are satisfactory. The majority of trusses on the market, however, are not of this type and are entirely unsatisfactory. The spring scrotal truss, either the French, German or English type, the Chase truss and the elastic truss embody within them defects which contraindicate their use.

IN CONCLUSION

It is on these three principles just outlined that the modern scientific basis of the injection treatment of hernia depend. First, a knowledge of the mechanism of inguinal hernia; second, an understanding of the principle of producing new connective tissue by the injection of nontoxic, noninjurious solutions; and third, the necessity of constant external pressure produced by a truss to prevent the descent of the sac contents while such connective tissue is organizing.

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REFERENCES

1. Harris, F. I., and White, A. S.: The Injection Treatment of Hernia, Surg., Gynec., and Obstet., 63:201, 1936.
2. Gray, G. B. D.: The Injection Treatment of Inguinal Hernia, Med. Press and Circular, 189:286, 1934.
3. Wyss, F.: Treatment of Hernia with Alcoholic Injections, Schweiz. Med. Wchnschr., 59:85, 1929.
4. Rice, C. O.: The Rationale of the Injection Treatment of Hernia, Minn. Med., 18:623, 1935.

TREATMENT OF HERNIA BY THE INJECTION METHOD[*][†]

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FOR the past one hundred years attempts have been made to cure hernia by the introduction into the inguinal canal of some caustic substance, or combination of substances, which would produce a chemical inflammation and result in scar tissue, thereby closing the canal. The chemicals used were often so powerful that abscesses were produced, followed by destruction of tissue, peritonitis, and at times fatalities. The ethics of these gentlemen were often very questionable, and they justly received the condemnation of the medical profession for their efforts. No animal experiments were done to find a nontoxic, noncaustic solution. No histologic examinations were made to prove that normal connective tissue was really produced, and the entire procedure was unscientific and doomed to failure.

STUDIES IN RECENT YEARS

During the past few years, however, interest has been revived in the cure of inguinal hernia by the injection method by men whose standing is unquestioned. Much experimental work has been done on animals to prove that the solutions used were nontoxic when injected into the peritoneal cavity, and even veins. Also tissue has been examined histologically from a few hours after injection to several months, showing the gradual development from a plastic exudate in the recently injected cases to a fibrous tissue proliferation from its early stages, in which the greater part of the tissue consists of young fibroblasts to the mature stage when the fibroblastic tissue has been converted into dense non-elastic fibrous tissue, in no way distinguishable from normal connective tissue.

EVALUATION OF SOLUTIONS

With these facts in mind it seemed altogether proper to attempt clinically to treat hernia by injecting the inguinal canal. To evaluate the merit of the various solutions offered, it was decided to inject the first seventy-five patients with Pina Mestre Solution. The second seventy-five patients were to be injected with Proliferol, reinforced by tincture of Thuja, phenol, and alcohol. The third seventy-five patients are now being injected with sodium psylliate (Sylasol).

The Pina Mestre Solution contains the following ingredients expressed in percentages: 25 per cent Krameria, 16 per cent Catechu, 15 per cent Rosa Canina, 15 per cent Rosa Centifolia, 14 per cent Vaccinium Myrtillus, and 15 per cent Monesia in 98 per cent alcohol. Proliferol is a distillate from the tinctures of several botanical herbs, to which is added thymol, tannic acid, and benzyl alcohol. The Thuja mixture consists of Lloyd's

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Read before the General Surgery Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

[†] Discussion of the three papers on the Injection Treatment of Hernia appears on page 395.

Specific Tincture of Thuja 25 per cent, phenol 50 per cent, and alcohol 25 per cent. This is allowed to stand for forty-eight hours and then decanted. Sodium psylliate (Sylasol) is a 5 per cent sodium salt from the fatty acids of oil of psyllium.

Before beginning the treatment of patients, rabbits were injected intraperitoneally with ½, 1, 1½, 2, 2½, and 3 cubic centimeters of Pina Mestre Solution, and other rabbits were injected with the same dosage of proliferol. Following the injection the rabbits showed only slight reaction. When autopsied several days later, none of them showed any peritoneal reactions or adhesions, except the rabbits receiving the 3 cubic centimeters dosage, and that reaction was only a mild congestion of the peritoneum and intestines.

SELECTION OF PATIENTS: SUITABLE TYPES OF HERNIA

It is absolutely essential to know what type of hernia is suitable for the injection method and what type should be operated upon. In the first place, the hernia must be completely reducible into the abdominal cavity and be held there at all times by a properly fitting truss. Strangulated or incarcerated hernias are, of course, surgical. Any irreducible mass or suggestion of a mass in the inguinal canal should contraindicate the injection treatment. Undescended testicle and hernia associated with hydrocele are also surgical conditions. Asthma, hay fever, severe bronchial conditions, also prostatic hypertrophy, urethral strictures, and any condition causing straining during urination, should be relieved before attempting treatment by injections. The same holds true for cure by surgery. Overly stout patients with large pendulous abdomens, causing increased intra-abdominal pressure, should be reduced before attempting treatment. Hemophilia contraindicates injection. Diabetes, tuberculosis, hyperthyroidism, and syphilis may be treated, depending on the severity of the condition. Age is no contraindication. One of my most gratifying results was obtained in a man eighty-four years of age, with a large direct hernia of fourteen years' standing. During the middle of the treatment he went through an attack of bronchial pneumonia, without damage to the proliferation already obtained. Six weeks later the treatment was continued to a successful conclusion. Femoral hernias must be selected for treatment with extreme care, and the same holds true for umbilical and incisional hernias. These are often not suitable for the injection treatment, due to adhesions and the fact that there is no definite sac formation. Patients with nephritis, cardiac disease, high blood pressure and any condition causing debility, making them "poor surgical risks," can be safely treated.

TRUSSES

Any surgeon using the injection treatment for hernia must know thoroughly the technique of fitting trusses properly and what type of truss should be used for each individual case. One type of truss is not suitable for all patients, and if the fitting of trusses is left to the laymen without proper supervision, they are almost invariably fitted too low over the external ring, instead of the maximum pressure being at the internal ring. Not 10 per cent of the millions of trusses worn are properly adjusted. A semiframe truss with counter pressure over the gluteal region gives, as a rule, the most efficient pressure and the greatest comfort. Elastic trusses are not to be used. The truss should be worn tight enough so as to cause an indentation or depression at the inguinal canal, thus approximating as much as possible the anterior and posterior walls of the canal during the process of solidification. Occasionally a truss too tightly fitted will cause edema of the scrotum and enlargement of the cord, particularly a double truss. The truss should be worn day and night for at least one week before beginning treatment, which allows the patient to become accustomed to sleeping in it, and gives the surgeon opportunity to observe if the hernia is held properly reduced, and if the skin will tolerate the pressure of the pad. The truss is worn day and night next to the skin, during the treatment, and for one month after the treatment is finished. It is then removed at night, but replaced before the patient gets out of bed and worn during the day, from four to six months, depending on the patient's type of work. If blisters develop under the pad, they are easily treated with compound tincture of benzoin or dusted with bismuth formic iodid powder.

Occasionally one meets a large scrotal hernia which is impossible to retain properly reduced with any type of truss. With these patients I have put them to bed, kept the foot of the bed elevated, and given them from four to six injections at daily intervals, then adjust the truss, which will now hold the hernia perfectly reduced, and finish the treatment in the usual manner.

TECHNIQUE OF INJECTION

Before discussing technique it seems proper to discuss by whom this type of treatment should be used. I hold that its apparent simplicity is one of its greatest drawbacks, as this method requires as much if not more technical skill and surgical judgment than the operative method. It should be employed only by men surgically trained, with a knowledge of the anatomy and pathology of the inguinal region, and an accurate diagnostic ability. Unfortunately, men seeing only an occasional hernia in their practice, who would never dream of doing a herniotomy because of lack of surgical training, will be tempted to employ this treatment, resulting in danger and disappointment to the patient, and bring discredit on the method. It is as much a surgical procedure as operation. The technique is as definite and exacting. The same knowledge and skill are required, if not more so, the only difference being that a syringe and a solution are used instead of a scalpel and sutures.

With the patient reclining on the treatment table, the pubic hair is clipped and not shaved. The table is then tilted to a moderately steep Trendelenburg position, and the internal ring is located two centimeters up from the middle point, between the anterior superior spine of the ilium and the spine of the pubes. This area is painted with merthiolate or tincture of iodin. A five cubic centimeter Luer syringe is used with two needles. The needles vary from 1½ to 3 inches in length, depending upon the thickness of the abdominal wall, are 22-gauge, and short-beveled. Three cubic centimeters of 2 per cent novocain without adrenalin are drawn into the syringe. The skin is pinched up and the needle inserted at right angles to the abdominal wall, down to the fascia of the external oblique muscle. Then with steady, firm pressure, using the finger touch and not the weight of the arm, the fascia is punctured and there is felt a sudden "give," like the puncturing of the head of a drum. The needle is advanced one-quarter inch further, and the tip of the needle is then in the region of the internal ring. This can be demonstrated by the fact that the point of the needle can be moved around freely. Then aspirate to make sure that a blood vessel has not been punctured, and inject the novocain. The syringe is next detached from the needle which is left *in situ*. The second needle is then attached to the same syringe and four cubic centimeters of the solution to be injected is drawn into the syringe. After a lapse of five minutes, to give the novocain time to act, the second needle is detached and the syringe is attached to the needle inserted into the internal ring, again aspirating to make sure that the needle has not changed position. The solution is injected very slowly. At times patients will notice a warm feeling in the area injected, and sometimes a stinging feeling in the penis and scrotum. This is due to the solution irritating the ilio-inguinal nerve, which lasts only a moment and is not severe. If during the injection the patient should complain of severe pain ascending up the abdomen toward the umbilicus, the injection should be immediately stopped, because that generally means that some of the solution has entered the peritoneal cavity. If this should happen, patients may complain of abdominal cramps and nausea, but this rarely lasts more than one-half hour. After the needle is withdrawn, the injected area is gently massaged with a small gauze sponge. This frequently increases the hot feeling for a moment. A small piece of adhesive plaster, one-half centimeter square, is then placed over the site of the puncture as a marker. The patient remains quiet for about ten minutes longer. The truss is then carefully adjusted. The table is leveled and the patient is helped to the upright position by supporting the shoulders. This takes the strain off the lower abdominal muscles. The truss is then inspected with the patient standing. He then returns to his work.

FREQUENCY OF TREATMENTS

The treatments are given three times weekly, but may be given daily if the reaction is slight and time is a factor. Occasionally a patient has to miss a treatment, which is not important. Some patients complain of a lameness in the inguinal region for the following twelve hours, but it is rarely severe enough to incapacitate them for work.

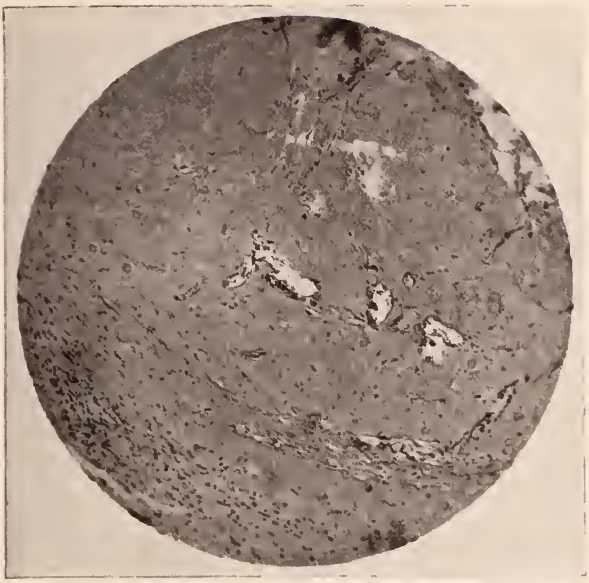

Fig. 1.—Microphotograph of tissue taken from patient who had received thirty-six injections. Note the very dense and markedly hyalinized tissue, with a minimum amount of cellular reaction. The tissue formed as a result of the injections is a cross between a scar and a keloid.

I like to begin the treatments at the internal ring for the following reasons: The internal ring is the most important area to obliterate, and the sooner the better. With the internal ring narrowed, the truss can better be depended upon to keep the intestines within the abdominal cavity at all times. If the external ring is injected last, one can often insert the index finger through the external ring up into the canal and insert the needle down to the tip of the finger. Then the cord lying posterior to the finger cannot possibly be injected. This gives one a better control of the situation. After the first injection at the internal ring, the canal is injected downward, the injections being given about 1½ centimeters apart, toward the external ring, with the finger in the canal whenever possible. Several injections are given as a routine into Hesselbach's triangle, and the external ring is injected lastly. The internal and external pillars and the arch are injected, with the finger pushing the cord out of the way.

I have found twelve treatments to be necessary on the average, although some patients may require fifteen or even twenty treatments, and others only eight or ten. There is a marked difference in the way patients react regarding proliferation; the negro proliferating more rapidly than the white man because of the tendency to keloid formation. The average patient receives three injections at the internal ring, four in the canal, two in Hesselbach's triangle, and three in the region of the external ring. In direct hernias the injections are given first in Hesselbach's triangle, with the index finger in the external ring as a guide. The edge of the defect in the conjoined tendon can often readily be palpated and elevated a bit, and injected down to the tip of the finger. In treating direct hernias a few injections are always given into the inguinal canal and the internal ring.

COMBINATIONS OF SOLUTIONS

For the past year I have been using the Thuja mixture to enhance the proliferating action of the solutions used. I find that a better proliferation is obtained than when Pina Mestre Solution and Proliferol were used alone. When using the Thuja mixture, a tuberculin syringe is used, and never more than six minims of this powerful mixture are used for an injection. The Thuja is employed at every fourth injection. So for the patient receiving twelve injections, the fourth, eighth, and twelfth injection would be the Thuja Solution. When using Sylasol, no local anesthetic is needed. The injection consists of three cubic centimeters in amount. The same technique is used as with Proliferol, but no Thuja Solution is used with Sylasol. Since using Sylasol, I have noticed that the proliferation seems more abundant and develops more rapidly than when either Pina Mestre or Proliferol was used. After eight to ten injections it is often difficult to give further treatments because of the density of the tissues.

A VARIATION IN THE METHOD OF INJECTION

A method of injecting has been advocated whereby the needle is inserted several centimeters above the site of injection. The needle is inserted into the skin at about a 45-degree angle. The point of the needle is directed downward toward Poupart's ligament. The perineal cavity is supposed to be less apt to be entered than when the needle is inserted at right angles to the skin. It is supposed to be a safer method for beginners. That may be true, but one must remember that the cord rests on Poupart's ligament, and is more apt to be damaged than by injecting into the center of the canal.

CONDITION OF TISSUES WHEN TREATMENTS HAVE BEEN FINISHED

When the treatment is finished, we expect to have the following changes in the inguinal canal: The external and internal oblique muscles which have been separated from the transversalis fascia by the protruding bowel are now solidly welded together with the Cremaster muscle and the spermatic fascia, and the loose areolar tissue in the inguinal canal. A dense fibrous tissue inguinal splint is developed. With the exception of the hernial sac not being removed, this should give the same end-results as an operation. I believe that in many patients the sac becomes obliterated by the walls fusing together, due to the chemical inflammation extending from the surrounding tissue through the walls of the sac. Eventually the sac is transformed into a fibrous band.

REPORT OF CASE

At autopsy it has been found not infrequently that a hernial sac extends down on the cord. These men were never conscious of having had a hernia, and never had symptoms of a hernia because the neck of the sac was so constricted that the abdominal contents were never able to enter the sac. By narrowing and solidifying the inguinal canal, we do exactly the same thing to the sac. Unless the neck of the sac can be completely obliterated, treatment by injection is bound to fail.

I wish to recite in detail an example of this. A patient presented herself for treatment with a large left labial hernia. She was given a course of twelve treatments, and apparently a very firm proliferation in the inguinal canal was produced. Two months later she returned with a definite bulging and impulse on coughing, but smaller than previously. She was again given a series of twelve treatments. By this time the induration was almost cartilaginous in feeling. After several months, and wearing her truss all the time, she appeared at the clinic. To our chagrin we found that a small hernia was still evident. She was very much opposed to the suggestion of operation, and for the third time we attempted to close the canal by injections. She received thirty-six injections altogether, without being able to close the hernial sac. She finally submitted to operation, and at that time it was found that the fascia of the external oblique was densely adherent to the underlying muscles. A large markedly thickened sac was dissected free. When opened and the neck of the sac examined, the cause of our failure was evident. Surrounding three-quarters of the circumference of the neck of the sac was a firm mass of fat about the thickness of the end of one's thumb. This prevented the proper closure of the internal ring and obliteration of the sac. Biopsies were taken from the muscle and fascia. The muscles were then sutured to Poupart's ligament. The density of the muscles and Poupart's ligament was astounding, it being with considerable difficulty that the needle could be introduced.

Autopsy Report.—Microscopic sections of the tissue removed showed a most interesting condition. The report of Dr. A. M. Moody, pathologist, was as follows:

> The scar tissue which has developed in sections of injected hernia examined in the pathological laboratory of the Southern Pacific General Hospital is very dense, relatively thick and markedly hyalinized. This condition has occurred with a minimum of cellular reaction.

NUMBER OF TREATMENTS MAY VARY

While on this subject of the number of treatments to be given an individual case, it is impossible to state definitely that ten to twelve, or even fifteen treatments, will be sufficient. What might seem to be a perfect closure at the completion of the treatment may several months later show some resorption, and several more injections would be indicated. If a patient returns from six to eight months after completion of the treatment, and the tissues are not as firm as formerly, and there is a definite weakening, I do not believe this should be considered a recurrence, but rather a case of undertreatment. One of the great advantages of this treatment is the fact that a recurrence can be prevented by a few more injections. Whereas, following an operation, the same condition would become a definite recurrence, requiring a second operation, which is always more dangerous and more unsatisfactory than the original one.

The number of treatments necessary must be determined by the size of the hernial defect, the response of the tissues to the injected solution, and the amount of resorption which takes place after the first course of treatment has been given. I believe that the treatment should be considered in two stages. The first stage is the original course. The second stage is the period of observation, lasting from one to one and one-half years. Patients should be carefully examined every two months after the truss has been removed. If an area is found which shows evidence of weakening, a few more injections should be given. Not until the patient has been under observation for from one year to eighteen months can one feel sure that a permanent cure has been obtained.

We have found in our series of 190 cases who presented themselves for treatment that twenty-two, or approximately 11½ per cent, were recurrences following herniotomy. I believe that with the combined technique of operation and injections, if recurrence is threatened, that the necessity for operating on a patient the second time for hernia will be eliminated.

COMPLICATIONS

Many complications have been mentioned as likely to be the result of the injection treatment, none of which in our series of 190 hernias treated and under treatment at present, have we encountered. Infection, abscess formation, peritonitis, atrophy of the testicle, and sterility, have all been noted as possibilities. The one most common complication we have had has been moderate swelling of the cord, which lasts from a few days to several weeks, but which always subsides, leaving no evidence of permanent damage. A few patients have complained of swelling of the testicle for seldom more than twenty-four hours. One must be particularly careful when injecting in the region of the internal ring because of the proximity of the anterior crural nerve and the femoral vessels. I make it a point when injecting this area to tell the patient to notify me immediately if there is any painful sensation running down the anterior surface of the thigh toward the knee. This happened in two of the earlier cases, but with no permanently bad result.

HERNIAS TREATED BY INJECTION METHOD AT THE SOUTHERN PACIFIC HOSPITAL

The injection treatment of hernia was first begun at the Southern Pacific General Hospital in July, 1934. At the time this paper was written a total of 190 cases had been treated or were under treatment. There were 140 indirect inguinal hernias, 21 direct, 4 scrotal, and 22 recurrent, following herniotomy; also two femoral and one umbilical. Out of this series we had only one definite failure, which required operation. Eighteen patients have required further treatment because of weakening of the canal due to complicating diseases, such as vomiting and loss of weight due to peptic ulcer, severe spasmodic coughing (associated with tuberculosis and asthma), influenza, and the improper wearing of the truss.

COÖPERATION OF PATIENT WITH SURGEON IMPERATIVE

I know of no type of treatment in which the coöperation of the patient with the surgeon is more imperative, especially regarding the wearing of the truss properly for the required length of time. The majority of our patients are rather ignorant laborers, and it is difficult to make them understand the importance that a properly placed and well-fitting truss has on the final result.

POSSIBLE CONTRAINDICATIONS

Considerable judgment must be used in accepting patients for treatment who are suffering from peptic ulcer, arrested tuberculosis, asthma, etc. They often appear to be in good physical condition and well-suited for the treatment. After the treatment is finished they may develop severe symptoms from their complicating disease, which will have an unfavorable reaction on the hernia recently treated. I speak feelingly on this subject, because I have recently examined two patients who apparently had a very satisfactory closure of their inguinal canal, but one man developed a very severe ulcer attack, with severe vomiting, hemorrhage, and loss of nearly forty pounds in weight. During the attack he removed his truss, and when he appeared at the clinic some months later his truss was absolutely useless, being now entirely too large, giving no support to the inguinal canal. Consequently, there was a small return of his direct hernia. The other patient returned fourteen months after the finishing of his treatment, with a small bulging at the external ring of one week's duration. He stated that for years he had been receiving 50 per cent disability compensation from the Government for arrested tuberculosis, associated with asthma, and that he had frequent violent coughing attacks, so severe as to cause emesis.

I cite these cases to show that while some patients may appear to be in good physical condition, histories should be very carefully taken to determine if any condition is present which might contraindicate the injection treatment.

RESULTS NOTED IN A POSTOPERATIVE SURVEY

Recently all patients who had received treatment longer than six months ago were requested to report for examination, or to have their company doctor examine them if they lived some distance from San Francisco. Questionnaires were sent out to 106 patients having 114 hernias, there being eight with double hernias. To date, those who have responded show a very satisfactory closure of the canal. Out of this number, seven will require further treatment, and two of the seven have developed tuberculosis, with consequent weakening of the inguinal region from excessive coughing and loss of weight. Of all the patients treated to date, eighteen have required further treatment. In a large percentage of these cases that would not have been necessary had we received intelligent coöperation from them. It is most gratifying to note the interest being taken in this method of treating hernia by the more conservative surgeons, medical schools and clinics, who several years ago showed little interest in it.

MORE STUDY NEEDED IN THIS WORK

Those of us who are pioneering this work should give every aid to others wishing to test this treatment seriously, and in a thorough scientific manner. I feel sure that every surgeon using this method on a large number of patients will have something constructive to offer from his observations. With the right men and institutions using it, a great deal of the prejudices against this treatment will be removed. Much experimental work must yet be done in the matter of solutions, number of treatments required, and in judging the type of hernia suitable for this treatment. By that I mean whether it should be confined, as some men think, to small indirect, incomplete hernias, or should treatment of all types of reducible hernia be attempted. Refinements in technique and the various types of trusses to be used must also come in for serious consideration.

We are looking forward to the time, in the not too distant future, when the surgeon will find in this method of treating hernia, a most valuable aid to the operative treatment, especially when used after operation, to strengthen a postoperative weakening of the canal, thereby practically eliminating the need for reoperating a hernia.

ECONOMIC VALUE OF INJECTION TREATMENT IN HERNIA

The present costs of the surgical treatment of hernia must be divided into two groups:

1. Compensation costs, being direct compensation for disability and time, or wage losses.
2. Medical costs for surgical fees, hospitalization, etc.

The most complete figures that I could obtain came from the Division of Statistics and Information, New York State Department of Labor. From 1930 to 1934, inclusive, 20,765 cases received compensation, amounting to $4,526,436, at the average cost of $217 per case for compensation. This compensation was for temporary total disability and was estimated at the rate of two-thirds of the wage rate. A general estimate, however, indicates that the total compensation paid to employees has averaged only 40 per cent of their wages, leaving an uncompensated loss in wages through disability of 60 per cent, or $323 per case, to the employees themselves. This must be counted into the aggregated cost of the surgical treatment even though the insurance carriers do not pay it.

Regarding medical costs, inquiry was made of three of the largest insurance companies' executives, statisticians, etc., and the consensus of their estimates is $170 per case for medical and hospital services. To this should be added $323, which is the uncompensated wage lost to the incapacitated employee.

The above figures were from the Division of Statistics, New York State Department of Labor, and from an article by F. E. Rutledge in the *Eastern Underwriter,* November 2, 1934.

Many states do not pay compensation for hernia cases, which means that the entire loss of wages from disability falls upon the wage-earner. In California, compensation is not paid for disability due to hernia, but an average of $150 per case is paid for medical and hospital care.

In analyzing five hundred histories of operations for hernia at the Southern Pacific General Hospital, I found that the average time in the hospital was nineteen and one-half days, and the average length of disability was forty-six days. A very conservative estimate shows the cost of hospitalization and loss of wages per case to be approximately $315. When using the injection treatment for hernia, there is no hospitalization and no compensation to be paid for disability. There is no loss in wages to be borne by the employee. The only costs are for the truss and the fee to the surgeon giving the treatment. The Industrial Commissions of two states, namely, Minnesota and Arizona, already recognize the injection treatment of hernia, and pay a fee of $50 per patient for the treatment.

The following is quoted from a letter to me from the Industrial Commission of Minnesota: "This commission recognizes the injection treatment of hernia, and the fact is that nearly all hernias are now treated by this method. When an employee sustains a compensable hernia and is treated by the injection method, the employer and insurer pay for the truss, which is worn while the treatments are being given, and pay the doctor for the treatments. There is no compensation for such cases, as there usually is no disability."

If figures for the entire country could be obtained to show the amount paid per year in the United States by insurance carriers for compensation and surgical treatment of hernia, the amount would run into millions of dollars. Add to this the uncompensated loss in wages to the employees and the costs of surgical fees and hospitalization for the treatment of hernia in private patients, which naturally would be much higher, and the total sum would be astounding. It is not difficult to estimate the tremendous savings to be made both in time and money when the injection treatment of hernia is more universally adopted.

CONCLUSIONS

1. A rational method of curing certain types of hernia is offered by the injection method.
2. It should be used only by men surgically trained, with a knowledge of the anatomy and pathology of the inguinal region, and an accurate diagnostic ability.
3. The method is safe when used by the experienced operator, but there are potential dangers when used by men with little knowledge of the exacting technique and of hernia in general.
4. The numerous complications mentioned are mostly theoretical, and have not occurred in this series of 190 hernias.
5. Many patients who are poor subjects for operation may be treated by this method and rehabilitated to useful occupations.
6. The value of the operative treatment of hernia can be greatly enhanced by the use of injections when a postoperative weakening is threatened or a recurrence develops.
7. Economically, there is a great saving of time and expense, because there is no loss of time from work, and no hospitalization is required.
8. The wearing of a properly fitting truss for at least six months after treatment is most essential.
9. A careful check-up every two months for eighteen months following the completion of the treatment should be made, and a few reënforceing

treatments given when signs of weakening are discovered.

10. The investigation of this method by hospitals and clinics where large numbers of hernias are treated would aid greatly to give this treatment the same dignity and standing as operative procedure.

11. Records of all patients treated should be kept for years, to determine the permanency of the cure by injection. Only by so doing can the true value of this treatment be estimated in terms of the results obtained by the operative treatment of hernia. If the results, say in ten years, prove to be only as good as those in the surgical treatment, at least a great economic saving would have been accomplished, and many patients who now refuse operation, or who are not physically fit to be operated upon, would be saved the danger and discomfort of an untreated hernia.

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INJECTION TREATMENT OF HERNIA: ITS PRESENT-DAY STATUS*

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Discussion *by Charles Eaton Phillips, M.D., Los Angeles; Francis M. Findlay, M.D., Santa Barbara; Leonard Dobson, M.D., San Francisco; E. Eric Larson, M.D., Los Angeles; Alanson Weeks, M.D., and G. D. Delprat, M.D., San Francisco; Donald C. Collins, M.D., Los Angeles; W. L. Weber, M.D., Los Angeles.* (The discussion refers to this and two preceding papers on the Injection Treatment of Hernia.)

THIS method of treatment of hernia, the basis of which has been established today on experimental laboratory findings, is possible in patients of all ages. With the present extent of the knowledge of this subject, however, it is advisable to limit its use to adults. The prime requisite is that the patient has a completely reducible hernia which can be maintained in complete reduction at all times during the course of active treatment by a properly fitting truss.

Cases of direct and indirect inguinal, and recurrent inguinal herniae, are the most suitable for this method of treatment. Although umbilical, femoral, and incisional herniae have been successfully treated by this method, it is best at this time to limit the discussion of its use to the inguinal varieties.[1]

Chronic bronchitis and cardiac disease are no contraindication to the injection treatment.

APPLICATION OF TRUSS

The first and most important consideration in the actual treatment of any given case is the application of a truss. The hernia must not only be reducible, but it must be one which can be held completely reduced at all times regardless of the activity of the patient. The selection of the truss is of the utmost importance, for herein often depends the success or failure of the treatment. The prerequisites, described in the previous paper, in the construction of the truss must be remembered. Such a truss must be worn day and night during the course of injection, and for a four-week period thereafter. Depending on the physical activity of the patient, it must be further worn during the day for an additional four- to six-month period. It is, therefore, imperative that reasonable comfort be provided in the fitting of the truss. It must be made of waterproof material, as the patient keeps it on during his shower. When the patient is fitted with a truss that is satisfactory, he is instructed to wear it day and night for a period of one week; and if it is uncomfortable, or if the hernia is not held completely reduced, adjustments are made as necessary. Occasionally, in patients who have never worn a truss before there is considerable irritation of the skin, and it may be necessary to discontinue wearing it for a few days. Before beginning the treatment, however, every difficulty involved in the fitting and wearing must be adjusted. This may take from one to three weeks, but such time is well spent, as it assures the success of the subsequent treatment. Once the treatment is begun, the truss is never removed, except by the physician for the purpose of treatment.

PROCEDURE IN TREATMENT

The treatment is begun with the patient placed on a surgical table in Trendelenburg position and the truss removed by the physician. It has been found unnecessary to remove the truss entirely, as it can be slipped down over the thighs while the patient aids by slightly lifting the buttocks. With the truss removed and the patient in this position, the hernia is found to be completely reduced. The hair over the inguinal region is clipped and cleansed with alcohol, then painted with iodin solution or tincture of merthiolate, after which the patient is ready for the injection of the proliferating solution. A suitable local anesthetic is given preliminary to the injection of the solution. A local anesthetic of novocain 2 per cent is satisfactory, but a combination of novocain 2 per cent, nupercain 1:1000, and benzyl alcohol 2 per cent in distilled water gives a more prolonged effect. If Sylasol is used, no local anesthetic is necessary, since it is not painful when injected into tissues.

Needles.—The choice of a needle depends on the distance between the skin and the inguinal canal. This varies with individual patients and with the thickness of the abdominal wall. In thin persons, a needle 1 to 1¼ inches is satisfactory, while in more obese patients needles of 1½ to 2½ inches may be required. Generally speaking, the smallest gauge commensurate with the length is the most satisfactory. With the proper-size needle determined, it is fitted to a five cubic centimeter Luer syringe and then filled with the anesthetic.

TECHNIQUE

The syringe is loaded with four cubic centimeters of the local anesthetic, and the injection is given with the operator standing on the left side

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Read before the General Surgery Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

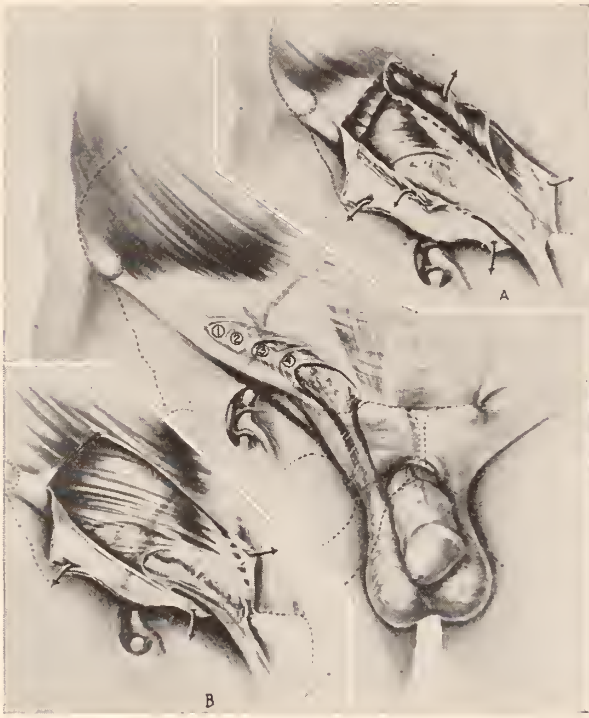

Fig. 1

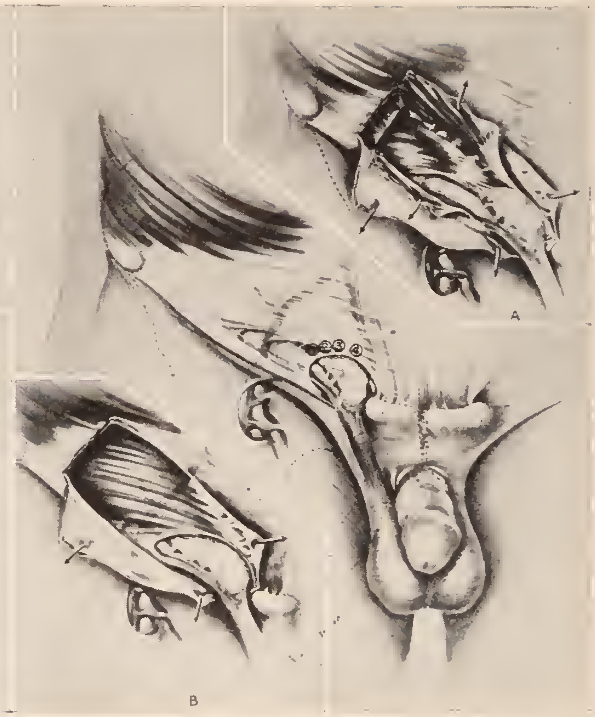

Fig. 2

Fig. 1.—Diagram to show points of injection in indirect inguinal hernia. Note that the first injections are given over the internal ring and subsequent injections placed down the canal. Two to four injections are given at each of the figured points.

Fig. 2.—Diagram to show points of injection for a direct inguinal hernia. Note that the injections are given over Hesselbach's triangle. Two to four injections are given at each of the figured points.

of the patient. Regardless of whether the hernia is on the right or left side, this position is most satisfactory for right-handed operators. The index finger of the left hand is then placed into the external ring by invaginating the scrotum. The tip of the invaginating finger can be palpated by the right hand. With the tip of this finger as a guide to the direction of the inguinal canal, the internal ring is located one centimeter above the inguinal ligament, and midway between the anterior superior spine and the pubic spine. The needle with the Luer attached is then inserted through the skin, fat, and through the external oblique muscle. No skin bleb of anesthetic is used, since the injection of the needle through the skin is no more painful than the injection of the bleb. As the needle passes through the external oblique there is a definite "give," similar to the one experienced in passing a needle into the spinal canal. This will be more marked if the needle used has a blunt bevel. The needle within the inguinal canal can often be readily palpated by the index finger of the left hand, which is invaginated through the scrotum into the canal. The plunger of the Luer is then withdrawn slightly to make sure that a blood vessel has not been entered, and if no blood is withdrawn the anesthetic is slowly injected. Following the injection the Luer is removed from the needle, but the needle is left in place. This is done so that the anesthetized area will correspond exactly to the area which will be injected shortly by the proliferating solution. If the needle is removed and a second needle injected with the solution after the anesthetic has taken effect, it is difficult to get the exact layer of anesthetized tissue. The projecting hub of the needle is then covered with a sterile gauze pad, and the patient cautioned neither to move nor cough.

A ten-minute period is then allowed to elapse in order to give time for the local anesthetic to take effect. The Luer is then filled with three cubic centimeters of the proliferating solution attached to the needle, and the solution is slowly injected. The needle is removed and the patient allowed to remain in the Trendelenburg position for a period of ten minutes, following which the truss is reapplied by the physician, and the patient can get up from the table.

SUBSEQUENT INJECTIONS

Subsequent injections are given every other day, and all except the first injection are of four cubic centimeters of the proliferating solution. In all injections following the initial one, the amount of anesthetic used is five cubic centimeters. In other words, the amount of local anesthetic used should be one cubic centimeter greater than the amount of proliferating solution injected. The dose of Sylasol is three cubic centimeters for each injection.

Subsequent injections are given in the region of the internal ring until that area is filled with plastic exudate; these are usually three to five injections. Further injections are given down the inguinal canal toward the external ring. In the case of a direct hernia the injections are given in the region of Hesselbach's triangle. (Figs. 1 and 2.)

After a few injections it is hard to identify the external ring, and a hard rubber-like mass is felt, occupying the greater part of the inguinal canal. If injections are now continued into this area, it feels as if the needle is being inserted into rubber. After a few injections one sometimes notices, on aspirating following the injection of the preliminary novocain, the return of a yellowish, murky fluid. This should not be mistaken for either bladder contents or peritoneal fluid. It represents the mixture of the anesthetic agent with the edematous exudate in the inguinal canal, and injections may be continued into such a region. Injections are given until the inguinal canal and the region of Hesselbach's triangle are entirely closed.

The number of injections in any given case depend on two factors, the size of the hernia and the seroplastic reaction of the individual. As a general rule, in elderly patients there is less seroplastic reaction, consequently more injections are required. A graphic record is kept of the injections given to each patient.

After the last injection the patient continues to wear the truss day and night for a period of four weeks to allow the newly formed fibroblastic tissue to increase in strength. At this stage of the treatment any descent of the contents of the sac would cause distention of the inguinal canal and a tearing and destruction of the newly formed fibroblastic tissue. Following this four-week period, it is advisable to wear the truss during the day only for an additional period of four to six months.

FOUR PHASES OF TREATMENT

A description of the complete course of treatment divides itself into four phases:

1. The preliminary treatment, consisting of eight to twelve injections as just described, given three times a week, usually closing the hernia.

2. The reinforcing treatment, consisting of one injection a week for four weeks. The location of these injections is determined by the judgment of the operator.

3. Period of immediate follow-up during which the patient is examined once a month for six months, and if there is any evidence of weakness an occasional reinforcing injection is given.

4. Final follow-up period, extending over a period of one year. The patient is seen at intervals of two months for check-up examination.

COMPLICATIONS

Complications during the course of treatment are surprisingly small. Patients not infrequently complain of curious transient subjective sensations, such as burning in the scrotum or penis, on the inner side of the thigh, or a sensation of warmth around the anus. These painful sensations are due to involvement of the ilio-inguinal nerve and its branches. By slight movement of the injecting needle when such sensations appear, this type of pain may be minimized. Occasionally, a few seconds after an injection in the neighborhood of the internal ring there may be a feeling of cramp in the distribution of the anterior crural nerve. Following the first or second injection, there may be some swelling and induration of the inguinal canal or of the cord, the skin of the scrotum or the epididymis. This may be painful, but it has never kept a patient from his routine duty and quickly responds to local applications of heat. Such complication is due to temporary obstruction of the spermatic circulation from the edematous reaction produced by the solution. However, there has been no case of permanent damage or any atrophy of the testicle. If while giving an injection the needle inadvertently enters a blood vessel, it is withdrawn and no injection is given that day. This has occurred about once in every seventy-five injections in our series. Rarely the needle is injected into the peritoneal cavity, and in our series it has only occurred eight times in about three thousand injections. If the proliferating solution is injected into the peritoneum, the patient complains of extremely severe cramp-like pain which gradually subsides in ten to twenty minutes, depending on the amount of solution injected. No untoward results have been seen clinically, nor have they appeared, as outlined above, experimentally from this accident. In order to minimize these accidents the injection of the proliferating solution should be given *very slowly*, and at the first complaint of colicky pain the injection is discontinued.

CONTRAINDICATIONS AND DANGERS

No case of irreducible, incarcerated, strangulated or sliding hernia or hernia associated with undescended testicle can be considered suitable for treatment by this method. The danger of perforating the bowel in such cases with a production of fecal fistulae and peritonitis is obvious. Even in the reducible herniae the peritoneal cavity may be occasionally entered through an error in technique and, although there is no danger to life by such a mistake, the patient experiences pain sufficient to produce a state of shock. To minimize such a dangerous complication, emphasis cannot be placed too strongly on the necessity of injecting the proliferating solution slowly and cautiously. In this respect the alcoholic solutions of tannic acid appear somewhat safer, as they produce an instantaneous peritoneal reaction which can be minimized by stopping the injection. A non-alcoholic solution such as Sylasol has a latent period of pain production, so that if the peritoneal cavity is entered the full dose will inadvertently be given. The shock resulting from such a procedure will not become apparent for five to ten minutes.

Hemophilia is a contraindication to this procedure as it is for any treatment which requires repeated punctures with a needle. Chronic urinary retention in elderly men increases the danger of bladder injury, and unless one is thoroughly experienced such cases should not be attempted.

It is a general surgical principle that injections of any type should not be given in the face of apparent superficial skin infection, and the indiscriminate use of this method of treatment in patients suffering from any type of infection in the area to be injected must result in disaster. Diabetics are best not treated because of their increased susceptibility to local infection.

Table 1.—*Statistical Table Results of Injection of Hernia to May, 1936*

Total Number of Cases: 165	Completed Cases	Patients Under Treatment	Total
Inguinal—Good surgical risks (direct and indirect) ...... (Average age 37)	73	66	139
Inguinal—Poor surgical risks direct and indirect) ...... (Average age 68)	23	3	26
			165

Cases in which the intelligent coöperation of the patient cannot be absolutely assured are best advised against this treatment. The inconvenience of wearing a truss continuously day and night for a period of six weeks to two months should be thoroughly explained to the patient, and unless a promise of obedience to this rule is obtained there is danger of complete failure of the treatment. A partially completed treatment in such a case may increase the danger of strangulation in that particular hernia. Highly nervous or apprehensive individuals, cases of hyperthyroidism and children are not good subjects in general for any form of local injection treatment, and are better treated by the recognized surgical procedures.

Especially dangerous is the use of solutions which have not been proved by experimental and clinical results to be suitable for the treatment of hernia by injection. The type of solution used in the treatment of varicose veins is absolutely contraindicated, as it works on an entirely different principle.

RESULTS

Since this work was started in the outpatient department of the Mount Zion Hospital early in 1934, one hundred and sixty-five cases of inguinal hernia, both direct and indirect, have been treated. The entire number of injections given has been well over three thousand. Although it is too early to state definitely that the results are equal or even better than those treated by surgery, we can say that at the completion of treatment in all these cases, and in the follow-up period available up to this date (May, 1936), the results from both the patients and the surgeons' standpoint have been eminently satisfactory. Bratrud,[2] Mayer, and Fowler in this country, Gray in England, and Wyss in Switzerland, have reported many thousands of cases with longer follow-ups, and their results have been very favorable; these authors claim a recurrence of only from 2 to 10 per cent.

For a statistical analysis we have divided our cases into two groups which have been designated as, first, the operative group or that group which would ordinarily be classed as a good operative risk; and, second, a non-operative group, including such patients who, for one reason or another, are poor surgical risks. In the first group our statistics show that the number of recurrences and the ease of cure compares most favorably with operative statistics, in fact our recurrence rate being about 4 per cent. In the second group the recurrence rate is about 22 per cent. (Tables 1 and 2.)

COMMENT

Recurrences.—Recently W. B. Coley, in the *American Journal of Surgery,* wrote an editorial on hernia and discussed the experience of workers at the Ruptured and Crippled Hospital in New York with the injection method.[3] He made the bare statement that "first the results seemed very satisfactory, but by the end of six months there were so many recurrences that the method was definitely abandoned." Such a statement is naturally extremely disquieting, but as no details are furnished regarding the technique of treatment it is impossible to critically analyze or explain his conclusions, in the light of our experience, which we are reporting today.

Our own figures show a recurrence rate at this time of about 4 per cent in a group of patients who would have been excellent risks for a surgical repair. Such a figure certainly is no worse than the expected recurrence rate following operation. We further believe that with greater experience in this method of treatment our recurrence rate in this group will be definitely decreased.[4]

A re-definition of the word "recurrence" must be found, as we apply it to a discussion of cases treated by the injection method. If a weakness appears at the site of the hernia following treatment by the injection method, we can more properly say that this case is one in which there has been insufficient treatment. If such a weakness does occur, a few additional injections will close the hernia. It is not a recurrence in the surgical sense of the word, but rather insufficient treatment. If we find, for example, that those cases which have had six or eight injections show weakness in the course of a few months following treatment, it may be necessary to increase the number of initial injections to ten, twelve, or even fifteen, as a routine procedure. The greater our experience has been, the more convinced we become of the importance of subsequent injections following the apparently complete closure of the hernia. If despite an indefinite number of injections the weakness still persists, these cases are the ones that we can classify as recurrences.

Regarding that group of patients whose average age is sixty-eight and who were suffering in

Table 2.—*Recurrences*

(All cases with from 6 to 18 months follow-up after completion of treatment)

	Inguinal Good Surgical Risk	Inguinal Poor Surgical Risk
Number of cases	73	23
Number of recurrences....	3	5
Percentage of recurrences	4.1%	21.7%

many cases from advanced forms of heart disease, chronic bronchitis and general senile debility, and whom we have placed in a group called nonoperative cases, we consider our recurrence rate of 22 per cent very satisfactory. One must remember that 78 per cent of this group were cured of their hernia, while surgery offered none of these patients the possibility of relief. Furthermore, of the 22 per cent we have classified as recurrences every patient has shown some degree of improvement either in marked diminution of the size of the rupture or improvement to the point where a truss could be fitted to satisfactorily maintain the hernia and eliminate the discomforts of a completely uncontrolled rupture.

Mortality.—There is no mortality attributable to the injection method as used today. Reports of mortality appearing in the literature from 1840 to 1910 followed the injection of phenol iodin, etc., and do not in any sense apply to the modern method. The dangers of postoperative pneumonia, embolus, and the other complications following the surgical treatment of hernia are familiar to all of us. It is significant that not once in the modern literature does there appear a record of similar complications following the injection method.

Applicability to Recurrent Hernias.—The method is particularly valuable in cases of recurrent hernia. Such cases are the bane of the surgeon. An operator should welcome a method which offers the possibilities of successfully treating their recurrent herniae without recourse to surgical intervention. The results obtained by the injection treatment in this group of cases have been, in our experience, particularly gratifying.

The treatment is entirely ambulatory. The advantage of the lessened cost, due to elimination of hospitalization and loss of work, is obvious.

SUMMARY AND CONCLUSIONS

1. The injection treatment of hernia is applicable to all cases of reducible inguinal hernia.

2. An exacting technique is described which involves:

(*a*) The use of proved solutions.

(*b*) Knowledge on the part of the surgeon of the anatomy of the inguinal region as well as the proper fitting of a truss.

(*c*) A period of treatment and observation extending over eighteen to twenty months.

3. There have been no untoward complications, no atrophy of the testicle, no impotence, no deaths in a series of 165 cases.

4. A recurrence rate of 4 per cent is reported by this method of treatment when used in young, good risk individuals; and of 22 per cent in a group of elderly, poor risk patients.

5. The method of treatment can be expected to give better results than reported, as more knowledge and greater experience is obtained by surgeons using it.

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REFERENCES

1. Harris, F. I., and White, A. S.: The Injection Treatment of Hernia, Surg., Gynec., and Obstet., 63:201, 1936.

2. Bratrud, A. F.: The Ambulant Treatment of Hernia, Lancet, 54:337, 1934.

3. Coley, W. B.: A Review of the Radical Treatment of Hernia During the Past Fifty Years, Amer. J. Surg., 31:397, 1936.

4. McMillan, W. M., and Cunningham, D. R.: The Injection Treatment of Reducible Hernia, J. A. M. A., 106:1791, 1936.

DISCUSSION*

Charles Eaton Phillips, M. D., (1919 Wilshire Boulevard, Los Angeles).—The history of the injection treatment of hernia seems to have originated with George Heaton in the year 1832. Whether he was a physician or a charlatan is not apparent. His claims to a 100 per cent cures might be considered an evidence of irregularity! Before the days of anesthesia his method had much to recommend it.

Since the advent of anesthesia it has been exploited by the quacks who have popularized the treatment with the slogan, "Hernia cured without the knife."

The fact that a simple obliteration of the sac by any means is said to cure from 70 to 80 per cent of hernias renders "experience fallacious and judgment difficult."

Hernia operations consisted of little more than a resection of the sac up to the time of Bassini who, in 1885 (published in 1888), showed that the most important consideration in the cure of hernia was in the restoration of the musculature over the defect. Hernias which healed by the formation of scar tissue were liable to recurrences in 20 to 30 per cent of cases, while restoration of the musculature of the canal resulted in a cure in 95 to 98 per cent of cases.

Anyone who has had extensive experience in the closure of abdominal wounds knows that the presence of scar tissue jeopardizes the result. The utilization of scar tissue in the closure of a defect invites almost certain subsequent rupture. While the recurrence may be delayed until there is a natural atrophy affecting the scar tissue, the certainty of recurrence varies with the amount of scar in its closure. The injection treatment claims to cure the hernia by scar formation.

Safety.—No one has the diagnostic acumen to tell accurately what is contained in the hernial sac. A small diverticulum of the bladder or adherent intestine or appendix at the internal ring cannot be determined by the most careful physical examination. A solution which is innocuous when injected into the peritoneal cavity or into a vein may cause necrosis of the bowel when injected into its wall. The same can happen when the injection is inadvertently made into a bladder diverticulum. The probability of injury to the vas and sterilization by injection should not be overlooked.

These are not theories. They are things actually happening following the injection treatment of hernias. The writer has been informed, on good authority, that three fatal cases have been admitted to one hospital within the past few weeks. The injections penetrated the wall of an adherent cecum with subsequent perforation, peritonitis and death.

If the treatment is actuated by the effort to save someone money, why not save the cost of the injection and let the patient continue to wear his truss?

The conclusions of such an authority as W. B. Coley and associates in the Ruptured and Crippled Hospital in New York, who have tried the method and have abandoned it, should not be taken lightly.

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Francis M. Findlay, M. D. (1515 State Street, Santa Barbara).—The papers of Doctors Girard, Harris, and White should be studied by every physician who contemplates using the injection method for treatment of hernia. The historical background and experimental evidence that support this form of therapy have been admirably summarized by them. These men have given us their clinical results in a frank, impartial manner. We are, therefore, indebted to them and to their colleagues, who are working in other medical schools and clinics, for the scientific, orderly presentation of a problem formerly handled by the charlatans and quacks.

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* A discussion on papers of Dr. F. R. Girard, page 385, and Drs. F. I. Harris and A. S. White, pages 382 and 391.

I am especially glad that the papers presented today have stressed the necessity for careful observation of clinical results and a further study of the problem. Reporting of bad as well as good results is essential if we are properly to evaluate any method of treatment. Only by combined efforts along these lines will we ascertain the truth. Success in this field demands a sound surgical training and complete knowledge of the anatomy of the inguinal region.

The injection treatment for hernia is now very popular with many doctors in this country, especially in California. Even the most skeptical must admit that, in the majority of cases, firm scar tissue forms and closes the hernia. There is, however, considerable, justifiable doubt in the minds of many sane, experienced surgeons as to the permanency of these results. Such observers rightly question that the fibrous tissue resulting from these proliferative solutions is the equivalent of living fascial grafts in the repair of a weakened abdominal wall. Time alone will tell whether the injection form of treatment will constantly give permanent results and eventually replace operation in the majority of cases.

The speakers have stressed some of the definite dangers inherent in this form of therapy. I wish to reëmphasize that this procedure is not free of risk, and to add a warning concerning the possibility of gas-gangrene infection in these cases.

In their enthusiasm for this nonoperative treatment some men fail to realize that there are definite inherent dangers in the procedure. The injection treatment of hernia is still somewhat of a blind procedure, for it is impossible to visualize the hernial sac and its contents, or to determine accurately its extent. Although the hernia may apparently be reduced, there is always a distinct possibility of a piece of omentum or intestine being caught in the inguinal canal, or adherent at the internal inguinal ring. An adherent loop of bowel can easily be punctured by the injecting needle and infection result.

I add this warning concerning the dangers of injection because of the recent occurrence of a fatal case of gas-bacillus infection which followed the injection treatment of hernia. This patient, a 75-year-old diabetic, had been treated in another city by a physician with considerable experience in the injection method, and he was given four routine injections of four cubic centimeters each of Pina Mestre solution at three-day intervals, without incident. But three days after the last injection the patient became ill and his diabetes grew worse. He did not improve at home, so two weeks after the last injection he entered the hospital. On admission he complained of pain in his groin and lower abdomen, with stiffness of his thigh muscles. Motion of the hip was painful, and the patient continued to run a septic temperature, at times being irrational. Although no localizing signs of pus could be found around the hip on admission, the thigh was swollen. On the twelfth day the patient's temperature rose to 104 degrees, and a distinct crepitation in the tissues around the hip was first observed. That afternoon the patient went into collapse, from which he failed to recover, dying on the fourteenth day.

Autopsy disclosed extensive gangrene of the right iliopsoas muscle, extending down into the thigh, apparently originating at the internal inguinal ring. The tissue had the characteristic appearance and odor of gas-bacillus infection. The anaerobic Bacillus welchii was recovered from the muscle tissue and identified both by smear and culture, removing all doubt as to the causative agent. Further examination disclosed a loop of small intestine adherent to the inguinal ring that apparently had been punctured by the injecting needle, causing leakage of intestinal content with the fatal gas-producing organisms.

Every physician should know that puncture of the bowel may occur during the injection treatment of hernia. If leakage of intestinal content occurs, a virulent anaerobic infection that is usually fatal may result. Although these papers today have shown that the injection treatment of hernia is now being studied in a scientific manner, we must remember that this form of therapy is not entirely free of risk.

Leonard Dobson, M. D. (Stanford Hospital, San Francisco).—At first I was prejudiced against the injection treatment of hernia. Before I was familiar with the technique I felt it was a blind procedure, frequently accompanied by serious complications and productive of doubtful end-results. As Doctors Girard, Harris, and White have shown in their papers, that opinion was fully justified until several years ago, when carefully conducted experimental work produced safe, effective solutions and a satisfactory technique. Before adopting a new procedure the medical profession wants to know the end-results, and carefully controlled follow-up series have only recently been reported.

I became interested in this treatment by observing in Doctor Girard's hernia clinic. I desired to determine the effects in the tissues of the various solutions used, so before starting to use the treatment, I conducted a series of animal experiments in the Stanford surgical laboratory. The rectus muscles of dogs were injected with three of the most commonly used solutions (phenol and thuja mixture, proliferal, and sylasol). Tissue was removed from the injected areas at various intervals from one to one hundred and twenty days and examined microscopically. The reaction of the tissues to the various solutions was very similar and paralleled the results obtained by Doctors Harris and White in guinea pigs, except that the early polymorphonuclear response was not as intense.

Since starting the injection treatment in the Stanford surgical clinic nine months ago, we have had no complications. Sylasol has been the solution used. The cases have been under observation too short a time to report end-results, but no recurrences have been noted to date. We have used the treatment in both direct and indirect inguinal hernias.

I agree that this method of treatment should only be employed by surgeons thoroughly familiar with the anatomy of the inguinal and femoral regions, and feel that the best results will be obtained by those who have injected a large number of cases. I feel that the method will not supplant surgery in the treatment of hernia, but is a highly successful adjunct in selected cases.

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E. Eric Larson, M. D. (1930 Wilshire Boulevard, Los Angeles).—Surgical repair of herniae has been improved to such an extent that most any well-qualified surgeon can offer to his patient an excellent prospect of cure. It is difficult to counteract this with new ideas and methods.

Since compensation insurance is universal, and herniae are general among humans, it is quite logical that both the insurance carriers and the layman are willing to try a new method for cure when time and finances may be of prime importance.

In spite of conflicting reports over a large series of cases, the more recent injection method must be thoroughly investigated and the results tabulated over a long period of time.

The authors of these papers have made a distinct contribution to the literature on the subject. The animal experimentation toward the cellular pathology caused by the different solutions is noteworthy. Their tabulated series of patients so treated are interesting, and certainly merit close study and comparison with the surgical repair.

The safeguards mentioned by the authors are made for the best interest of the patients and the method of treatment, and should be carefully considered. The subject is still quite controversial and complications can end in disaster for the patient.

Careful selection of coöperative patients to those with reducible herniae, securely held by a spring truss and treated by well-qualified surgeons who know the anatomy and complications that can easily occur, is stressed by the authors.

Certainly poor risks for surgical repair such as the aged and those with chronic ailments, such as diabetes and tuberculosis, and even those patients with an enlarged ring conducive to a potential hernia, should have the advantage of the injection treatment. Recurrences of minor proportions can also be treated with efficiency by injections.

I have had the opportunity of examining many such individuals with excellent results after this treatment. Attention has recently been called to the danger of truss pressure to the cord when there is a scar tissue surrounding this structure. Refinements in technique and elaboration of the best solution to be used, as well as after-care, have not been fully worked out. Such papers as these will add a great deal in perfecting the scarifying method for treating reducible hernia. I am sure nearly all of us agree it has already established a place in our method of treating herniae.

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Alanson Weeks, M.D., and G. D. Delprat, M. D. (384 Post Street, San Francisco).—Doctor Girard, and Doctors Harris and White present a very careful and clear discussion of the subject, "Treatment of Hernia by the Injection Method," and it is perhaps presumptuous for those who have not used this method of treatment to discuss their papers.

The authors describe the fluids used for injection and state that their action is due to the production of an exudate and later fibrous tissue development between the layers of the muscles of the inguinal canal. The rationale of the treatment is based upon the fact that after an inguinal hernia is reduced, pressure on the inguinal canal will prevent the contents of the hernia sac passing down the canal. If, instead of the pressure being exerted from the outside, the two layers of the inguinal canal are made to adhere to one another by fibrous tissue, the same result will be achieved. Therefore, this treatment is applicable to those patients who have indirect inguinal hernias which are completely reducible. This treatment does not apply to persons having incisional hernias or irreducible hernias, and it would also appear to us that it would not apply to direct inguinal hernias, although it has been used for such. The value of this treatment lies particularly in that group of patients who, because of various systemic conditions, are unable to undergo surgical procedure; and it is also advised in others for economic reasons.

The authors also draw attention to the fact that this type of treatment may fall into disrepute because it may be undertaken by individuals who have very little knowledge of the anatomy of the inguinal region who might be tempted to use the injection treatment, whereas they would not trust themselves to undertake a surgical cure of the condition.

In regard to the matter of healing of hernias, it has been always our teaching that one could rely very little upon the tensile strength of scar tissue in that if one relied upon scar tissue to hold a hernia, he would almost always encounter a recurrence, and in fact one of the common causes of repeated recurrences in the same individual lay in the fact that scar tissue was used for closure and the scar tissue gradually gave way. On the other hand, the actual suturing of fascia to fascia reduced to a minimum the area of scar tissue formation, and therefore the fascia itself is called upon to support the hernia. One of the causes of recurrence is the difficulty in bringing fascia to fascia, obtaining instead merely fascia to scar tissue. Therefore, in performing an inguinal hernioplasty, if one were unable to obtain fascia on the edge of the conjoined tendon (either owing to the fact that the fascia was poorly developed or that the muscle belly was so well developed that the fascia was out of reach, being some distance from the inguinal ligament), it was desirable to follow the method shown us by Dr. T. M. Joyce of Portland, who obtains a long strip of fascia from the edge of the external oblique and uses this to suture the external oblique down to the shelving edge of the inguinal ligament. This method in his hands, he states, has given him excellent results without recurrence in the last five years. This is an improved modification of the original McArthur's autoplastic suture in the radical cure of hernia in that the main value of the operation is the suturing of the cut edge of the external oblique with a live suture, under the cord to the shelving portion of the inguinal ligament, and then the suturing of the extra outer part of the fascia of the external oblique over the cord can be done with catgut or silk, that part being apparently unimportant. The main modification of the operation is that no suturing is done through muscle fibers, which will always cause scarring and destruction of the normal activity of the muscle.

It appears to us at the present time that such a method of treatment is preferable, particularly in view of the fact that it is well known that an indirect hernia cannot be always distinguished clinically from a direct hernia, because if the external ring is reasonably small one is not always sure whether the hernia sac comes down to the canal from the internal ring or from Hesselbach's triangle, and the one would be amenable to the injection method and the other probably not.

We believe that the operative treatment of inguinal hernia is so simple nowadays under local anesthesia, and so certain of a good result with the use of the strip of live fascia for suture material, that the use of any blind method, such as injection, is not in keeping with good practice.

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Donald C. Collins, M. D. (1930 Wilshire Boulevard, Los Angeles).—The contributions of Doctor Girard and of Doctors Harris and White upon the injection treatment of hernia are both timely and noteworthy. They are to be congratulated upon presenting us excellently prepared studies of one of the most highly controversial subjects of the present moment in medicine. I do not wish to detract one iota from the credit that is justly due these authors, but several facts merit serious consideration in the proper evaluation of this problem.

The large American clinics and hospitals in the East and Middle-West, where this form of therapy was so enthusiastically begun on a large scale, some six years ago, have now found that the percentage of recurrences has been considerably increased over that experienced following surgical repairs. Thus, they have either markedly limited the indications for this mode of treatment or have decided that it should be discontinued. The complications that may follow injections cannot be lightly brushed aside as of no consequence. In my own limited personal experience during this past year, I have observed two fatal pulmonary embolisms, a secondary gangrene of the sigmoid and upper rectum, and two complete bowel obstructions resulting from the accidental escape of some of the injecting fluid into the peritoneal cavity.

Other objectionable factors in the injection method of therapy include the constant wearing of a "truss" day and night for a period varying from three to nine months following treatments. This is contrary to all surgical conceptions of optimum conditions for proper healing. The injection method does not guarantee that patients may again resume heavy work unless they have the additional protection of a "truss." The total amount of money expended by the private patient is about the same whether he is operated upon or injected. The only difference lies in the fact that the physician who performs the injections gets all the money instead of dividing it with the hospital.

During the past few years the conviction has steadily gained ground that, surgically, hernias should utilize, if possible, the patient's own fascia for suture material by either the McArthur or the Gallie-J. C. Masson method. Many of the failures in the past following hernioplasties were directly attributable to the use of improperly chosen foreign suture materials. Autogenous fascia does not slough out nor does such a hernial repair break down in the presence of infection. This generation of physicians has largely forgotten the bitterly learned truths of the Bassini era concerning the necessity of removing the hernial sac and transplanting the inguinal vas and its structures superficially under direct vision so as to insure a permanent cure.

Any injection method is of necessity an admittedly blind procedure. Injury to the ilioinguinal and iliohypogastric nerves is a serious complication which may lead to a diffuse weakness of the entire lower abdominal wall on that side, as we have observed to occur occasionally in a carelessly performed McBurney incision. Hematoma, thrombophlebitis, or injury to the contents of an irreducible hernial sac may lead to grave consequences. The sweeping and unproved contentions that this method of therapy can be safely used in all varieties of herniation is without foundation, and will not stand before the impartial scrutiny of established scientific facts. Any investigator, claiming to have healed a hernia permanently, must submit as evidence at least a five-year follow-up study. Injection therapy cannot be safely entrusted to the general practitioner who only occasionally treats a hernia. Thus, this method can only be safely employed by those who are doing this method of therapy daily. It is my belief that injections may be tried in those individuals cautiously in whom surgery is contraindicated either because of advanced age or due to grave organic disease.

These are some of the reasons why I firmly believe that the injection method of treating hernias is one of only temporary and fashionable interest. I predict that the use of autogenous fascial sutures will probably prove to be the ultimate solution to the entire hernial problem, and will give such a high percentage of permanent cures that many of our present concepts will be discarded as worthless.

Again, I wish to compliment both Doctor Girard and Doctors Harris and White on presenting such excellent and timely studies upon this important question. They have performed valuable pioneer work in an attempt to better our present hernioplasty results. Through efforts such as theirs the field of medicine is advanced and its scope of usefulness is widened; so that in the end men may live happier and more useful lives.

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W. L. Weber, M. D. (Pacific Electric Building, Los Angeles).—I had the pleasure of hearing the writers at the California state meeting at Coronado in May, 1936. It was Doctor Girard who, although perhaps altogether unknown to him, first stimulated my interest in taking up the injection treatment of hernia. As a matter of fact, before the meeting of the American College of Surgeons held in San Francisco in October, 1935, I was definitely critical of and prejudiced against the treatment without, however, having had any personal experience with the method. I had observed a number of patients who had been injected, and the results, to say the least, were not encouraging. I even felt so strongly against the method that I wrote to a certain company giving as my opinion that if they should continue to refer their men for this treatment some serious untoward results would almost certainly occur, and they might be liable for damages because of their having referred the patients for the treatment.

On my way to San Francisco in October, 1935, in discussing the injection treatment with a number of other doctors, I expressed my opinion that the method, so far as I could judge, was unscientific, and certainly not based on sound surgical principles. However, after watching Doctor Girard inject a number of patients, and after having seen some of the patients whom he had injected a year or so before, I came away convinced that the method, in the proper hands and with the proper technique, was certainly entitled to a decent trial before condemnation. Some time after the San Francisco meeting I had the great pleasure of seeing Doctor Bratrud in Los Angeles, and he was good enough to visit our clinic and tell and show us much. The studies of Doctors Rice and Bratrud and others have demonstrated, in my opinion, that the method in the properly selected case has a distinct place in our treatment of hernia.

Statistics the world over suggest that the operative treatment of inguinal hernias is not all that is to be desired, and the fact that there have been so many methods evolved for the radical operative cure of hernia also suggests that operative treatment is not the last word. I need but refer to the article that appeared in *Surgery, Gynecology, and Obstetrics* of April, 1934, by Andrews and Bissell, in which they quote statistics from various authors who give a percentage of recurrences after operation varying from 8 to 32 per cent, and these results by men of standing. This article refers to the direct type of hernia, and I am certain that the percentage of recurrences of the indirect type is not far behind. These colleagues say that the statistics furnished by various operators in the direct type of hernia show, "The results are so bad as to constitute a major surgical scandal."

My experience, over a term of some twenty-three years, has convinced me, at least in so far as my own results are concerned, that the failures after operation and the appalling economic loss involved in all cases, whether the results are good or bad, clearly prove that operation for radical cure of hernia in every case is not warranted in the light of present knowledge of the injection treatment.

My personal experience with the injection method dates only from November, 1935, but since that time I have personally injected some thirty-six patients, and in every case there has been a decided improvement, and in the majority an apparent cure. In some of the very large hernias the results have been so remarkable that it seems almost incredible that injection of any solution could produce such an effect. In my small series of cases there have been no infections, no sloughing, no hydrocele of the tunica, no testicular atrophy, and in only one case has there been an untoward result, and that in a private patient, an extremely thin person suffering from bilateral hernia, in whom upon the first injection I must have struck the anterior crural nerve, because the patient was not able to stand upon his right leg, and for a number of days he complained of weakness in the leg. This patient has entirely recovered except that the right patellar reflex is still lost. The sensory disturbance in the anterior aspect of the thigh has recovered.

The properly selected case, in my opinion, is one in which the hernia is of direct or indirect inguinal type, easily reducible, and capable of continued reduction by a properly fitted, comfortable truss. I do not believe, at least at this time, that femoral and umbilical hernias are safe or proper types for injection. An important phase of the injection treatment of hernia is the tendency on the part of the operator to charge so much an injection. This, I believe, is wrong, because in the hands of unscrupulous or mercenary persons the number of injections can be augmented *ad libitum*. Furthermore, this method of treatment in any given case is much more troublesome and difficult than is the operative technique, and in my opinion it should be placed on the same financial basis, and like the operative treatment, it should not be undertaken by anyone who is not thoroughly competent to deal with hernia surgically.

The authors are to be congratulated upon the splendid presentation they have made, and I am certain that their writing will do much to stimulate others; at least, to consider the injection method and to regard it as an acceptable treatment in properly selected cases.

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Doctors Harris, White and Girard (Closing).—The authors have repeatedly reiterated in their papers the necessity of confining this method of treatment to men properly trained not only in the technique of hernia injection, but also to those trained especially in surgical diagnosis and operative treatment of the inguino-abdominal region. The fact that this stand is maintained and emphasized by the discussers is appreciated. Too strong emphasis cannot be placed on the limitation of this method of treatment to men especially qualified in its use. It is realized that much harm and serious complication may result from injudicious employment of this method by men in general practice. The selection of cases and the indications for treatment must of necessity be made only by those qualified and trained in the details of its technique.

It is likewise true that all surgical operations may result in disaster when performed by incompetent and untrained operators. The necessity of limiting the use of any surgical procedure to trained men is obvious. Complications which occur in untrained hands must be blamed on the operator and not on the method of treatment. In a consideration of the injection treatment of hernia emphasis must be placed on the thousands of satisfactory results, without complications, recorded by men of unquestioned integrity and not on scattered reports and hearsay evidence on the complications experienced by men untrained in this procedure.

It is significant that in the 350 cases reported in these papers, no serious complications have occurred. Absence of serious complications in these cases is due both to careful selection of patients and to the proper conduct of the treatment. Improper selection of cases and improper conduct of the technique discredits not the treatment but its method of application.

It must be further reiterated that the injection treatment of hernia is not advocated as a substitute for surgical treatment, but is to be used as an adjunct in the treatment of certain selected cases. It is our purpose to demonstrate the feasibility and practicability of this method and to subsequently definitely determine the type of case in which it will have its greatest use.

ARTHRITIS—A MEDICAL PROBLEM*

By ROBERT STEWART PEERS, M.D.
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DISCUSSION *by Leonard B. Barnard, M.D., Oakland; Robert T. Pottenger, M.D., Pasadena; H. Gordon MacLean, M.D., Oakland.*

THE confusion of names, theories, and treatment which blankets the subject of chronic arthritis of uncertain origin is a most unhappy one. One is usually confronted, first, by a new dialect. The origin of each form is primarily in our lack of knowledge as to the source of the rheumatic syndrome, and that each is a production of clinical observation rather than scientific etiologic classification.

PROPOSED GROUPING FOR PATIENTS WITH ARTHRITIS

In proposing a grouping for patients with arthritis, I do so for the limited purpose of practical care. It in no way interferes with any particular theory. The infectious theory, the endocrine theory, the constitutional theory, and the allergic theory, are all of academic interest at this writing.

In accommodation to our lack of knowledge, any grouping has many discords. The life cycle of arthritis is at present without a beginning and many links are absent. Clinically, at the very best, we pick up the rheumatic syndrome in early pubescence.

ALLISON AND GORMLEY'S CLASSIFICATION

To orient ourselves, we are not discussing joint disease of known origin, which, in the classification of Allison and Gormley, is as follows: 1. Traumatic (sprains). 2. Bacterial (tuberculosis). 3. Arthropathes (such as tabes). 4. Constitutional (such as gout). We are interested primarily in joint disease of unknown etiology.

GROUPS FOR JOINT DISEASE OF UNKNOWN ETIOLOGY

As an expedient to group care it is desirable, in my mind, to group patients in this syndrome as follows:

Group 1

This large group contains those otherwise known as atrophic, infectious, rheumatoid, proliferative, and Type I. It is the polyarthritis of small joints whose onset occurs in most any age, but most frequently in the second to fourth decades, usually insidiously, with transient periods of remissions, but a slowly progressive, deforming type of pathology, resulting in atrophy and ankylosis. In my experience, it groups itself into three large distinct clinical divisions.

1. *The Acute.*—The more unusual method of onset (when adequate history is obtained). The patient is febrile with puffy, white, painful swelling of the joints, and with marked limitation of active and passive movements.

2. *The Chronic.*—The clinical group which divides itself into two subgroups—the early and late. First, the early, in which the symptomatology is predominant, with signs limited usually to the small joints. Second, the late, in which the proliferative pathology has more or less progressed, resulting in limitation and deformity, but yet in active state.

3. *The Arrested.*—The third large group in which the disease itself has become arrested, leaving more or less deformed joints, limited in movement and with general constitutional depression as the marked feature.

Group 2

The allotment in this grouping is based on pathologic progression and not a chronologic assignment. This large group contains those otherwise known as hypertrophic, osteoarthritic, osteochondrous, degenerative, and Type II. It is the type in which the large joints and the back are most frequently involved, characterized pathologically by degenerative changes. It divides itself into two large clinical divisions.

1. *Mid-Life Group.*—The disease becomes active usually during the fourth or fifth decade, and the patients divide themselves into two groups: those who are overweight and those who are underweight.

2. *Senile Group.*—The second large group occurs with senescence.

Group 3

This group, known as mixed or type 3, presents, clinically and pathologically, a varying mixture of the two preceding types, and is divided, clinically, into two divisions, depending upon which pathologic changes appear predominant.

Group 4

This is the group which I choose to call the arthralgias. The onset is at any age and presents questionable and variable pathology. It is a result of differential diagnosis, and presents many subgroupings, such as vasomotor instability, endocrine, arteriosclerotics, neurasthenics, and neurotics, blood dyscrasias, and a large miscellaneous group.

COMMENT

Besides the clinical picture and history, further support is gained for the above groupings in a simple laboratory procedure, a procedure well tested by others with consistency in results.

The sedimentation test is used in a variety of conditions. There are several methods of procedure. Our method is that of using four cubic centimeters of blood and one cubic centimeter of 3 per cent sodium citrate solution, and measuring the erythrocytic drop in millimeters over a period of one hour.

In a group of seventy-four selected, uncomplicated cases, of which thirty-seven were drawn from Group 1, thirty from Group 2, and seven from Group 3, it was elected to test the practical value of this simple procedure.

In Group 1, of the thirty-seven patients, unfortunately only twenty-eight of them were followed for any period of time. Twenty-four patients showed curves which paralleled their clinical improvement. In one the curve improved, but there was no apparent gratifying result in the patient's symptomatic report. In three the curves were unimproved and there was no improvement in the patient's general welfare.

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In the thirty cases in Group 2, all the curves were within normal limits.

In Group 3, three curves paralleled improvement and three showed improvement, but with no important improvement in the patient's own story.

ADVANTAGES OF GROUPING SYSTEM

This procedure serves, first, as an aid in grouping; second, as a diagnostic lead; and, third, as a method of measuring the patient's clinical response. It might be mentioned that secondary anemia (which so frequently, in textbooks, is spoken of as an accompaniment of this disease syndrome) has been encountered in our groups most infrequently and, therefore, would have no effect on our interpretation of the sedimentation test. Other factors contributing to change in the test should always be considered.

It is assumed that a usual systematic medical inventory is acknowledged. Unfortunately, this is usually banned for a lamentable enthusiasm to some publicized single method of assault. In all groups, orthopedic management (feet, posture, physiotherapy, and corrective exercises), is to be added.

SPECIAL FEATURES OF GROUPS 1, 2, AND 3

Space permits discussion of two features common to Groups 1, 2, and 3. The first, a fitting application of the basal metabolic rate, a now common procedure which shows a definite deviation in this disease syndrome. The test, as with any other test alone, remains an isolated laboratory procedure. Our normal range is based on statistical study of more or less normal subjects. We, by chart and table, correct for weight, height, age, sex, barometric pressure, room temperature, and the patient's temperature. So consideration should be given that the test is run in the morning, the particularly uncomfortable part of a rheumatic individual's day. A rheumatic individual has greater or lesser muscle groups quiescent from atrophy and inactivity. He or she is often ambulatory because of a spirit of determination. In reflection of the above, minus 5 to plus 15 per cent, is a conservative figure of the adequate normal range. The depression of metabolism in this disease is not a new observation. Its interpretation merits further consideration.

In 111 cases where the patients were culled from 314 under care and divided as follows—thirty-nine in Group 1, thirty-three in Group 2, fifteen in Group 3, and twenty-four in Group 4—the following was presented on initial testing under adequate circumstances. In Type 1, five gave a positive reading, one a zero reading, and thirty-four cases a minus reading. In Type 2, four gave a positive reading, one a zero reading, and twenty-eight cases gave a minus reading. In Type 3, three gave a positive reading and twelve a minus reading. In Type 4, thirteen gave a positive reading, one case a zero reading, and ten cases a minus reading.

Further analysis: The thirty-four cases of the thirty-nine cases in Group 1: thirty gave a reading of below minus four, twenty-one of the thirty-four were below minus nine, eight of the thirty-four were below minus fourteen, and one a reading below minus nineteen.

In Type 2, the findings are much the same in that twenty-two of the twenty-eight cases gave a reading below minus four, seventeen of the twenty-eight gave a reading below minus nine, eight of the twenty-eight gave a reading below minus fourteen, and two gave a reading below minus nineteen.

In Type 3, a group smaller, but with similar tendencies, in that ten of the twelve cases gave a reading of below minus four, seven of the twelve gave a reading of below minus nine, and three of the twelve gave a reading of below minus fourteen.

For completeness' sake, those in Group 4 were included. In this group a different inference is evidenced in that of the ten cases with a minus reading, nine were below minus four and only four below minus nine, with one below minus fourteen.

THYROID THERAPY

The question arises: What response do these individuals give with thyroid therapy? In this group, thyroid, medically, is purely stimulative and is borne out in their tolerance to thyroid therapy. In each of the three groups, a quarter to one and one-half grains a day is usually most adequate. In the arrested of Group 1, tremor, palpitation and nervousness soon intervene, most frequently with the smallest of doses.

Type 2 endures, apparently, the stimulative therapy with better grace.

Type 3 follows closely in its response to the above two.

The low metabolic rate in this group is not due to the lack of thyroid hormone, but is brought about in some other fashion. The patient's improvement and well-being after the first test are more important than any subsequent basal metabolic rate. It is assumed that ordinary medical consideration is given in administration of a drug of this potency.

SUGAR TOLERANCE

The rheumatic syndrome displays another common feature not new in one sense, but particularly interesting from a practical point of view, and of interest with the advent of the new one-hour, two-dose sugar-tolerance curve.

The delayed sugar removal from the blood of patients suffering from arthritis is not specific with this disease group. This manner of behavior apparently is exhibited in all three groups.

It is not necessary to reiterate the normal phenomenon with the old type sugar-tolerance test, except to mention that our standard is for fasting blood sugar—90 to 120 milligrams, and the normal individual has a curve within the fasting range in two hours.

TEST OF EXTER AND ROSE

The new test proposed by Exter and Rose is based on the well-known phenomena that, when more sugar is administered to normal individuals, more sugar will be utilized, while the reverse is true in diabetes. This study is conducted on definitely non-diabetic individuals.

The new test is as follows:

1. One hundred grams of glucose in 650 cubic centimeters of water and divided into two equal parts.
2. Fasting blood-sugar and urine specimens collected, and the first dose given (50 grams of sugar, 15 per cent solution).
3. The 30-minute blood and urine specimens collected.
4. Second 50 grams are given.
5. The 60-minute blood and urine specimens collected.

To quote Exter and Rose:

"The typical criteria for the normal one-hour, two-dose test is:

"1. Fasting blood sugar within the normal limits.

"2. Rise in blood sugar that does not exceed 75 milligrams in a 30-minute sample.

"3. The blood sugar in a 60-minute sample is: (a) less; (*b*) the same; (*c*) or does not exceed the 30-minute sample by five milligrams."

The patients used for this study present a small but adequate cross section of active arthritics of Groups 1, 2, and 3. The total number of cases was forty-nine. The total number of cases with old type blood-sugar test was forty-nine. The total number of cases with the new type test was forty-three. The total number of cases with new and old type tests was forty-two. Twenty-three were derived from Group 1, fifteen from Group 2, and eleven from Group 3.

On analysis of the forty-two cases checked with the new and old type tests, thirty-five showed delayed sugar removal in the old type test, leaving seven who showed a normal curve. Of the thirty-five showing delayed sugar removal by the old test, checked by the new method as outlined above, twenty-one showed abnormal or diabetic-like (?) tests. In these twenty-one cases, six showed the atypical deviation in the first half-hour reading, that is to say, the rise was more than 75 milligrams in the 30-minute blood sample. Three showed a rise of more than 75 milligrams in the first blood sample, and a rise of more than five milligrams in the 60-minute sample. Twelve were abnormal or diabetic-like (?) in that they showed a rise of over five milligrams in the 60-minute blood sample. Of the seven that showed a normal curve by the old test, three showed abnormal or diabetic-like (?) tests. Of the forty-two tested by the new manner, eighteen showed a normal new type test.

In concentrating these figures in another manner of speaking, 83 per cent showed delayed sugar removal by the old test, and 57 per cent showed abnormal or diabetic-like (?) curves by the new test.

It has been suggested by others that the phenomena of delayed sugar removal arises from the curtailment of the blood supply. However, this curtailment of the blood supply exists in a certain extent in the arthritic during a remission, particularly those in Group 1.

In the normal subject, the ingestion of glucose so stimulates the so-called "insulin-glycogen mechanism" that almost any amount can be handled without hyperglycemia. Briefly, blood-sugar readings are augmented by glucose, principally from the intestine and glycogenolysis. The factors that depress the blood-sugar level are glycogenesis, glucolysis, and fat formation, and, in unusual circumstances, glycosuria. In the rheumatic syndrome we have a transient hyperglycemia with only a rare glycosuria. There is a delay, apparently, in the mechanism which controls glycogenesis and glucolysis. The above mechanisms are under the control of the pancreatic hormone, executed with and by the vegetative nervous system.

The above phenomena is no different than our depression of metabolism in that it is another reflection of a constitutional disease and is in no sense related as an eitologic factor. However, we are led to the following conclusion: That false readings may be expected with the new type, two-dose sugar-tolerance curve in cases where diabetes is not an established diagnosis and the rheumatic syndrome is an active factor. The delayed sugar removal is another manifestation of disturbed physiology in the rheumatic syndrome, and this phenomena should be considered in the management of any case of arthritis, especially in those patients in Group 1 of the chronic and arrested types.

IN CONCLUSION

In comment of the above, it is most necessary to group an arthritic subject for care in a manner of his clinical progress. A furtherance in their alignment and advance is offered in the sedimentation test. The true arthritic is a nonmyxedematous individual. Thyroid therapy is stimulative medication only, tolerated in small doses with a low threshold for undesirable side effects. The new two-dose, one-hour sugar-tolerance test does not supplant the older test in this syndrome.

No larger field offers itself for the tonic use of insulin in supportive treatment. A balanced medical perspective with expedient application, rather than therapeutic sniping, offers this group a promise of remission.

2939 Summit Street.

DISCUSSION

Leonard B. Barnard, M. D. (2939 Summit Street, Oakland).—Arthritis of unknown origin has been called the "no man's land" of medicine. Every division, both surgical and medical, has "taken a fling" at it, with resultant confusion in terminology and treatment.

When we consider that its incidence comprises a greater total of chronic disease than diabetes, heart disease and tuberculosis combined, we must realize it is entitled to a more important position and a studied approach.

It is a general disease with joint manifestations. Therefore, the primary attack must come from the internist, who should draw freely on the coöperation of the other specialties. It has been authoritatively stated that 50 per cent of the afflicted have lost their confidence in the ability of the medical profession to treat them. We must accept this as a challenge and improve our position concerning the disease.

The three laboratory procedures which Doctor Peers has presented are an illustration of the awakened interest in this topic, and tend to bring home to us the general nature and at the same time the multiplicity of form of this disease.

Let us always remember this is a complex disease. We cannot neglect the basic orthopedic principles of protection from deformity, lest we be left, when the remission occurs, with severe secondary manifestations, which make the respite of small functional value.

It is possible that we may have to come to the institutional care of a large number of these afflicted, as has been so well exemplified by the Swedish National Hospital for Rheumatism, before proper care can be administered.

I agree with Doctor Peers, that in the meantime, by gradually strengthening our laboratory procedures from the standpoint of diagnosis and prognosis, we can hope for a large measure of remission.

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Robert T. Pottenger, M. D. (65 North Madison Avenue, Pasadena). — Doctor Peers' paper illustrates the meaning of the definition given by the American Committee for the Control of Rheumatism, that arthritis is "a generalized disease with joint manifestations." Physiologic disturbances occur not only in the skeletal system, but also in the circulatory system, the digestive tract, the nervous system, and the general metabolism.

Doctor Peers has again shown that a delay in the removal of sugar from the blood can frequently be demonstrated in all types of arthritis. Therapeutic deductions from laboratory data are difficult of evaluation when each procedure is only one factor in a general program. When laboratory observations suggest a radical change in the diet, the effects are particularly difficult of evaluation; as the resultant changes in the physiology may be due to additional factors introduced in the new diet, rather than to the correction of the hypothetical abnormality. This observation of an apparent weakness in the mechanism of sugar metabolism (which is shown by the delay in removing sugar from the blood) gave rise to the use of a "low caloric diet," and also a "low carbohydrate diet" in the treatment of arthritis. In practice these may amount to the same thing, as a low caloric diet must still have adequate amounts of protein which becomes largely of animal origin with a consequent increase of the fat content. The dehydrating effect of this diet was noticed, and Pemberton, in 1934, called attention to the apparent therapeutic value of this effect.

As you know, the average diet contains ten or more times as much carbohydrate and protein combined as fat, while a ketogenic diet contains four times as much fat as protein and carbohydrate. A low caloric diet might contain three times as much protein and carbohydrate as fat, and if three tablespoonfuls of cod-liver oil were given each day, twice as much. My observations show that a dehydrating effect begins when there is about two times as much protein and carbohydrate as fat in the diet, and the loss continued so that when the fat has been increased to one and one-half times the combined protein and carbodrate the loss of water amounts to three or four pounds. The water loss observed may be due to the reduction in the carbohydrate intake, or the metabolic effect of the fat, or to other factors; since the diet has been altered not only in a reduction in the number of calories and the proportion of fat, carbohydrate, and protein, but also in the mineral and vitamin content, as vegetables make a large portion of the bulk of the diet. Furthermore, the water loss may simply be the result of a favorable alteration in the metabolism rather than the cause of it.

After a scientific prescription of a diet there remains the variable of the patient. Unfavorable results from a prescribed diet may be due to the patient's failure to eat the foods thereon, or perhaps more rarely to assimilate them. Several patients who were doing poorly on a low carbohydrate diet were found, on weighing their food intake, to be eating about 25 grams of protein a day, and this largely of vegetable origin. Simply increasing the protein intake to about 60 grams was followed by clinical improvement.

The importance of particular factors in the diet can be more readily evaluated if the whole diet is studied in respect to all the food factors in at least as exact terms as the erratic method of weighing foods will allow. If dietetic studies in arthritis are reported in this way it will be possible to correlate the work of the various investigators, and we may hope for more rapid progress in this one phase of the arthritic problem.

H. Gordon MacLean, M.D. (230 Grand Avenue, Oakland).—The grouping of arthritis presented by Doctor Peers is a very workable one. It is very similar to the older grouping of atrophic, hypertrophic, and mixed types of arthritis. His fourth group of arthralgias covers nondescript types, many of which, however, as times goes by will fit into one of the first three groups.

The use of the sedimentation test indicates that Group One is markedly related to infection, and that Group Two is not so closely related to infection.

His findings in regard to basal metabolic rate are very similar to those by Boothby in 1922, in which 90 per cent of all arthritics fitted into the basal metabolic readings of minus fifteen to plus fifteen. He has shown that the tendency in all groups concerned is toward a slightly minus reading, and that this is not at all typical of arthritis.

The sugar tolerance test, using the one-hour two-dose method, still continues to bring out the fact that there is a disturbed carbohydrate metabolism in arthritics, but here, again, this is not any real characteristic of arthritis.

All of the suggestions given lead one to the conclusion that arthritis is a constitutional disease, with many factors being the cause. It is necessary to treat each arthritc individually. If he is underweight, the use of insulin to bring up his weight is highly beneficial, as in other individuals who are undernourished. Also, if he is overweight it is necessary to have that weight reduced. Diet, in other words, should be suited to the individuals: high caloric for the undernourished and low caloric for the overnourished.

Removal of infection is necessary in all types of arthritis when it is found. Medication at the present time is only of value for the relief of symptoms.

Rest would be ideal for most arthritics, and some day, perhaps, we can treat them in the same way that we today treat the tuberculous individual, getting the disease in hand early and not late, as is our custom at the present time. The difference between the treatment of tuberculosis and the treatment of arthritis today is that the tuberculosis individual gives his entire time to taking care of his disease, while most arthritic individuals continue working and pay attention to their treatment only as a side issue.

The need for well-regulated institutional care of arthritis over a long period of time is very great. Good results will be obtained when we have the combined efforts of the internist, the orthopedist, the physiotherapist, and the occupational therapist, all working as one.

HYPERPYREXIA: AS AN ADJUNCT IN THE TREATMENT OF CEREBROSPINAL AND KAHN-FAST SYPHILIS*

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ROSENBLUM of Odessa, in 1876, was the first to inoculate, with malaria, patients suffering with general paresis and other mental diseases. In 1878 Oks translated this paper into German.[1] Wagner Von Jauregg, while in Constantinople, thirty years later, popularized the malaria treatment of neurosyphilis.[2]

ARTIFICIAL FEVER AND MALARIA TREATMENT

Artificial fever production in recent years has superseded the malaria treatment for three reasons:

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* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25 to 28, 1936.

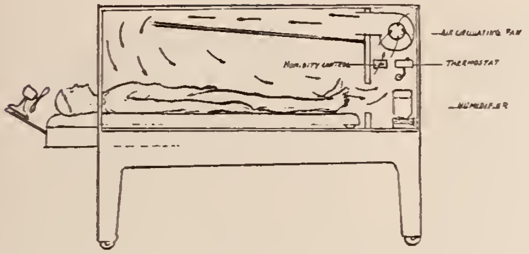

Fig. 1

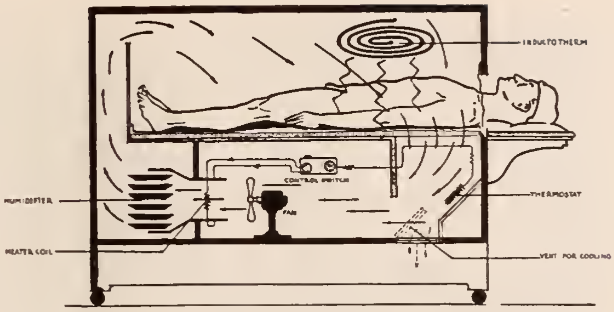

Fig. 2

Fig. 1.—Diagram of Kittering Air-conditioned cabinet as described by Simpson, Desjardins and others. Note the humidifier, thermostat, air circulating fan, humidity control and fan that blows air on head and face. Temperature in the cabinet ranges from 150 to 160 degrees Fahrenheit and humidity 50 to 75 per cent.

Fig. 2.—Kimble cabinet. Note thermostat control switch, heater coil, humidifier and the heavy insulated coil of the inductotherm suspended above the patient's chest and abdomen. Temperature in this cabinet at all times is 100 degrees Fahrenheit. Fever is generated in the patient solely by magnetic waves from the suspended coil entering the patient's body.

1. The former is twice as effective, curing 65 per cent of 742 cases.

2. The mortality from malaria therapy is from seven to ten times as high as with artificial fever heat. In the literature there are eighteen deaths with the treatment of 700 patients with hyperpyrexia, whereas the malaria therapy death rate is 10 to 30 per cent.[3] We three have treated over 800 patients in the past six years, with no deaths. Neymann of Chicago has treated over 1,000 cases by this method, and his death rate is nil. Desjardins of Mayo's treated 362 patients, with one death.

3. When a syphilitic is infected with malaria there are two diseases to treat instead of one. Other superimposed infections have also been recommended, but the aim in the past five years is to get away from the production of fever by such infectious agents as rat-bite fever, relapsing fever, and malaria.

DIATHERMY

In previous reports by Potter [4] and Redewill,[5] over 200 cases of neurosyphilis and Kahn-fast cases were described, having been treated with diathermy with very successful results. However, there are several disadvantages with the use of this modality, such as the binding of patients with large electrodes, packing around the patient rubber sheets and blankets, all of which add greatly to their discomfort. Kettering and Sittler [6] of the General Motors Company brought out an air-conditioned cabinet with the use of ultra-high frequency electric currents applied by means of condenser discharges of a modified short-wave radio transmitter. They pointed out that the air-conditioned cabinet was to dissipate sweat as it collected on the skin surface, and to prevent arcing and burning of the skin as a result of concentration of short radio waves in the drops of sweat. Accidentally, they discovered that their cabinet would generate fever in a patient just about as satisfactorily with the air-conditioned apparatus going and without the short-wave radiation. Since then they have used solely the air-conditioned cabinet to produce in patients fever ranging from 105 to 107 degrees Fahrenheit (Figure 1). They have lent fifty-five of these units to medical research centers to produce hyperpyrexia in all types of acute and chronic infectious cases, and some of the results have been reported. (Simpson [7] and Desjardins.[8])

The great drawback in the use of cabinets that attain a temperature of 160 degrees Fahrenheit, thereby attempting to raise a patient's temperature with heat applied from without the body (which is also the same principle that is used through hot-water baths, electric light and infra-red cabinets), is that the patients so treated have a pulse rate twenty to thirty beats to the minute higher than those patients that are treated by modalities such as diathermy and electromagnetic currents that generate the heat within the body.[9] Therefore, as can naturally be expected, patients that are treated for five or six hours with the unnatural method of attempting to force heat into the body from without show a more frequent tendency of displaying symptoms of heat collapse. This is probably due to the severe strain placed on the sympathetic nervous system, when such heat is applied to the whole skin surface area. When fever heat is developed by electric magnetic current, such as the inductotherm generates, and the patient lies in an air-conditioned cabinet for six to nine hours, with a temperature of the cabinet of not over 102 degrees Fahrenheit, the patient is not only a great deal more comfortable, even with a temperature of from 105 to 107 degrees Fahrenheit, but shows no tendency to have any of the symptoms tending toward the ultimate heat collapse. It would seem, therefore, that by far the more preferable type of hyperpyrexia cabinet to use would be the latter type, which is known as the Kimble (Figures 2 and 3). We three presenting this paper have been fortunate in being able to use such Kimble cabinets in Bremerton and San Francisco in treating syphilis and gonorrhea infection and their complications.

TWO METHODS OF PRODUCING FEVER HEAT

All the different methods of producing fever heat can be divided into two classes: in the first, the environmental temperature of the media about the patient is maintained at a level higher than the internal temperature of the patient;[10,11,12] and in the second, there is a group of applications in

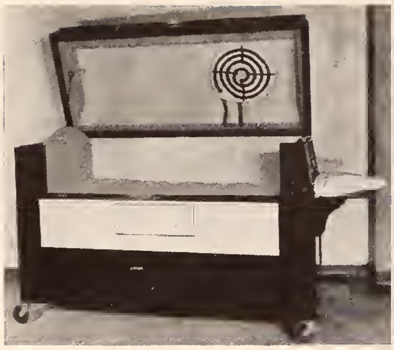

Fig. 3

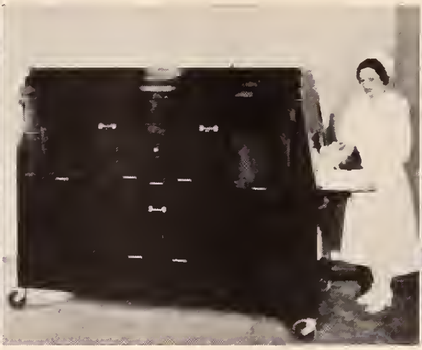

Fig. 4

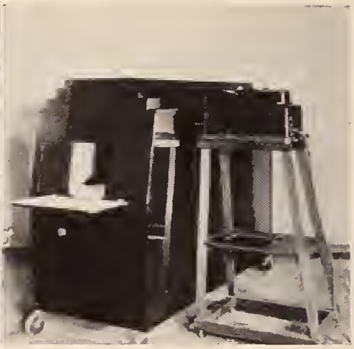

Fig. 5

Fig. 3.—Kimble cabinet (General Electric) with the top lifted and side panel dropped down. The patient lies on sponge rubber, 1½ inches thick covered with white rubber cloth and terry cloth. Note the inductotherm coil attached to inside of top. When the lid is lowered, the coil can be lowered or raised at will within the proper distance of the patient's chest and abdomen.

Fig. 4.—Kimble cabinet, side view when closed and holding a patient. Note panel doors. Upper door can be opened clear across the cabinet or just a small door can be opened for use in waiting on the patient. Lower door opens into heating mechanism that can be easily regulated from without.

Fig. 5.—Kimble cabinet, end view showing inductotherm attached. This inductotherm is attached to the suspended coil shown in Fig. 3.

which the temperature of the atmosphere about the patient is maintained at a level lower than the internal temperature of the patient. The first type includes hot baths, steam, electric light, infra-red and hot-air cabinets; the latter group includes diathermy, short wave and ultra-short wave bipolar modalities and electromagnetic radiation. This last modality is applied either in specially constructed blankets or in cabinets with the magnetic coil suspended above the patient.

For the past seventy-five years factors have been used to raise the temperature of the body with mud baths, hot-water baths, electric-light cabinets, steam cabinets, infra-red cabinets, and others. Where the temperature has been raised to not over 102 degrees, probably no untoward results have been noticed, if the applications have been applied for short periods of time. But in modern hyperpyrexia, with the raising of the temperature from 104 to 107 degrees Fahrenheit for a period of five or six hours, this method of raising the temperature is not only inadequate, but dangerous, because many patients so subjected show signs of heat collapse. Where heat is thrown into the body from the outside, the striking thing that is noticed is that the patient's pulse is, as said above, twenty to thirty beats a minute more rapid than when the heat is induced within the body.

As to the electromagnetic cabinet method, how near does it simulate nature's own means of producing heat? Does it violate any physiologic laws? Is it applicable to the sick and feeble patient? The answer to these questions are obvious as one becomes acquainted with the method.

BIOPHYSICS OF NEW CABINET THERAPY (KIMBLE)[13]

How the electro cabinet works is briefly as follows: The patient is placed in a specially designed cabinet. The temperature of the air in this cabinet is maintained automatically between 99 and 100 degrees Fahrenheit. The relative humidity approaches 70 per cent.

From a special adjustable coil suspended above the patient's chest and abdomen, a high-frequency magnetic wave is projected through the body tissues (Figures 4, 5, and 6). Due to their biophysical properties, these waves change into heat waves in the more conductive tissues of the body. More conductive tissues are the blood, vascular organs, and the muscles. Within one to two hours the internal temperature of the patient is elevated 3 to 5 degrees Fahrenheit. The magnetic wave is then shut off. From this point on the artificial fever is similar to a natural fever. In other words, we have replaced only the chill of a natural fever with the induction and release of artificial heat within the body by a biophysical agency.

It stimulates a natural fever in the following ways:

1. The internal temperature of the patient is always higher than the environmental temperature.

2. Heat at all times can leave the skin by radiation and conduction. (The skin is never forced to absorb heat.)

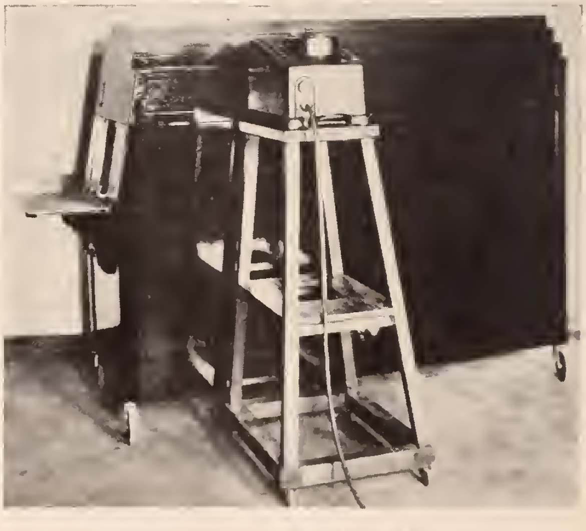

Fig. 6.—Kimble cabinet, lateral view with inductotherm attached and hooked up to line switch.

3. Some heat is lost by evaporation of perspiration (relative humidity 70 per cent).

4. The body produces its own energy for the continuation and further elevation of the fever. (By acceleration of metabolism.)

These factors, together with other features incorporated within the cabinet, such as a soft mattress, intermittent circulation of air, etc., keep the patient comfortable. If a patient is comfortable he is not irritable and restless. This permits the use of a small amount of sedatives.

There are practically no contra-indications for the magnetic cabinet type of thermal therapy. One caution is mentioned, namely, that every patient should be examined thoroughly in order to ascertain that no other intercurrent disease is present for which a fever would be contra-indicated.

TECHNIQUE

Preparation of Patient for Hyperpyrexia.—A careful physical examination should be made of each patient previous to treatment, including general physical examination, basal metabolism, electrocardiograph, blood pressure, blood and spinal Wassermann. Two following tests are especially useful in evaluating the behavior of the circulatory and nervous systems to hyperpyrexia: (1) Exercise test, to determine how quickly the pulse will return to its normal rate after exercise. (2) Cold pressor test[14] for early diagnosis of essential hypertension.

Sedatives. — Of the numerous sedatives advocated, we find the best ones to administer previous to and during hyperpyrexia treatment are: Two teaspoonfuls of pentabromids in water by mouth, and one-half grain of codein phosphate hypodermically one-half hour before beginning treatment. Repeat the codein during treatment for restlessness that may occur in the first hour of treatment. We find the barbiturates are somewhat depressing to the circulatory system, that morphin may be the direct cause of apnea during treatment, and scopolamin or hyoscin have a tendency, especially in neurosyphilis cases, to render the patients excitable and even mildly maniacal and difficult to control.

Stimulants.—Outstanding stimulants for weak pulse are caffein sodium benzoate, coramin (ampoules), hot coffee and carbogen (carbon dioxid 5 per cent, oxygen 95 per cent), inhalations for patients with disturbed respiration. In pending heat collapse, adrenalin is contra-indicated because, as said above, it contracts the superficial capillaries, thus retarding loss of heat through the skin.

COURSE OF TREATMENT

No two patients behave just alike under treatment, however, as Clarence A. Neyman says, concerning the new electromagnetic induction, creating heat within the patient, rather than applying heat from without, as followed by other forms of treatment, "one can maintain temperatures of 41, or even 42, degrees centigrade, or up to 106 degrees Fahrenheit, or five, six, seven or eight hours with comparative ease and without taking a great risk." Neyman, in discussing Desjardin's paper on fever therapy,[15] says: "We use electromagnetic induction now in combination with the cabinet, where the temperature of the cabinet never rises above 105 degrees Fahrenheit. The cabinet will not in itself produce fever at all, but simply serves as a sort of blanket in which the patient can move freely. With this sort of apparatus, patients in advanced stages of diabetes, with organic heart disease, with advanced arteriosclerosis, with diseases of the liver and the like, have been and are being treated, and our death rate remains virtually nil in over one thousand cases."

ACUTE SYPHILIS DOES NOT RESPOND READILY TO HYPERPYREXIA

What we mean by this is that it requires many very high fever heat treatments to kill the spirochete in the human body so that the patient is actually rid of the acute syphilitic infection, whereas in the chronic, and especially the neurosyphilitic, comparatively low fever heat will produce remarkable results—symptomatically speaking. And especially in syphilitic aortitis cases does fever heat produce striking results.

OTHER OBSERVATIONS

A specially trained nurse should be in constant attendance during a fever-heat treatment. There are scores of important items to be carefully looked after while giving such a treatment. To overlook any of them may invite disaster. We have not the space here to write down all the "Do's and Don'ts," nor can one become skilled in giving fever heat by reading a list of warnings. A fever-heat nurse is in the same category as an anesthetist, and must be actually trained under skilled hands. Simpson et al.[16] loaned out over fifty Kittering machines to various clinics, as we mentioned above, but they would not allow any of their machines to be used until nurses who were to handle the cabinets were trained for six months in the Dayton hospital.

LABORATORY FINDINGS

During fever heat a leukocytosis occurs; there is a drop in the sedimentation-test reading; during fever therapy the systolic pressure drops 20 to 30 points, and the diastolic during height of the fever often drops to zero. There is a great loss of chlorids which have to be replaced by giving normal salt solution by mouth. Because of the piling up of sodium in the system there is a tendency to an alkalosis; therefore, fruit juices are contra-indicated during treatment.

REPORT OF CASES

Case 1.—J. H. M. This patient has had a Kahn-fast blood and spine for twenty-two years. He has had innumerable courses of neoarsphenamin, tryparsamid, bismuth, and iodids. All previous treatment has been unable to reduce his serology, and aseptic fever is the last resort. The patient went through his first two treatments without incident, maintaining a high temperature of 105 degrees and over for three hours. A temperature was reached of 105.4 degrees.

His basal metabolism was minus 19m, and one-quarter grain thyroid was given to correct this; the same to be taken twice daily. Following the third treatment, his Kahn reaction was negative.

October 10, 1935—The patient states that he has a feeling of gusto and vigor, and that his well-being is sustained. Kahn is negative after the third treatment. Eating well and sleeping well.

October 16, 1935—The patient's fourth treatment. Came in feeling fine. Temperature was not elevated so high this time.

Treatment well sustained and patient comfortable. The blood Kahn taken following treatment returned negative. Laboratory reported that there was no doubt about it.

* * *

Case 2.—K. The patient has had chronic tertiary lues for years. Came to us complaining of shortness of breath and pain in the chest, around the region of the aortic interspace. X-ray showed a definite widening of the aortic arch. A diagnosis of vascular syphilis with aortitis was made. The patient has had three years' treatment with neoarsphenamin, mercury, and bismuth. He continued to complain of pain and shortness of breath on exertion. High temperature treatment was instituted today. The patient went through his first treatment without any trouble whatever.

October 13, 1935—The patient states that since his first treatment he has lost his rheumatic pains in shoulders and legs (tabetic ?). He feels generally improved and does not become so short of breath. He passed through this treatment without discomfort, but began to complain of pain over his heart toward the end. He was given HMc No. 2 for restlessness. It was found that temperature could be raised provided the humidity was maintained around 38 to 40 per cent, and with less dry-bulb heat.

October 14, 1935—The patient feels a little weak and shaky today, and complained of pain again in his shoulder (right). His occupation may have something to do with this, as he is compelled to work overhead. Otherwise he feels well.

UNSKILLED HYPERPYREXIA TREATMENT IS DANGEROUS

Although the great majority of the cases treated in the electromagnetic cabinet progress very satisfactorily with no untoward affects during treatment, however, anyone doing considerable amount of hyperpyrexia work is bound to get hold of a very troublesome case once in a while, even demanding the best skill of the doctor and nurse to pull the patient safely through the treatment, as the following will illustrate:

Case 3.—H. R. B. Age, 52. Diagnosis: Tabes, optic atrophy and syphilitic aortitis with myocarditis and severe anemia. The patient was treated on April 16, 1935, at Bremerton, Washington, by two of us. 5:15 p. m.—Temperature, 98.8; pulse, 72. Temperature of cabinet through treatment ranged from 100 to 104 degrees Fahrenheit. Inductotherm cut off. Time, 7:00 p. m.—Temperature, 105.4; pulse, 120. Inductotherm cut off. Time, 7:45 p. m.—Temperature, 105.2; pulse, 118. Inductotherm cut on. Time, 8:15 p. m.—Temperature, 107.2; pulse, 126. Inductotherm cut off. From this point the temperature rose in one hour to 108. Pulse, 158; temperature continued increasing slightly and at 11:00 p. m.; 108.8 pulse; 170; 1,000 cubic centimeters of normal saline solution intravenously. Carbogen gas inhalation given constantly. Pulse thin-running and irregular. Caffein, 7½ grains, given. Patient cyanotic around the ears, hands, and feet. Ghastly pallor about the face, reflexes nil. 12:30 a. m.—One thousand normal saline solution, intravenously. 12:45 a. m.—Temperature, 108; pulse, 160. Beginning violent seizures and convulsions of feet and hands; then arms and neck; then of whole body—the same lasting about twenty minutes. 1:30 a. m.—Temperature, 106.8; pulse, 140. One thousand normal saline solution intravenously. Convulsions beginning to lessen in severity. 2:15 a. m.—Temperature, 105.2; pulse, 132. Pulse very feeble. Caffein, 7½ grains, given. 2:45 a. m.—Temperature, 104; pulse, 132. Patient cooling down. Ice water to legs and arms. 3:15 a. m.—Temperature, 103.2; pulse, 130. Pupillary function returning. Patient very restless. 4 a. m.—Temperature, 102; pulse, 124. Involuntary feces and urine; five movements in one hour. 4:30 a. m.—Temperature, 101.2; pulse, 120. Patient moaning and tossing about a great deal. 5 a. m.—Temperature, 101; pulse, 120. Patient beginning to regain consciousness. From 5 a. m. to 10 a. m. the patient gradually cooled to normal. Mentality was hazy. The patient had severe pain in lower back. Blood pressure throughout the treatment averaged 92 systolic and 30 diastolic.

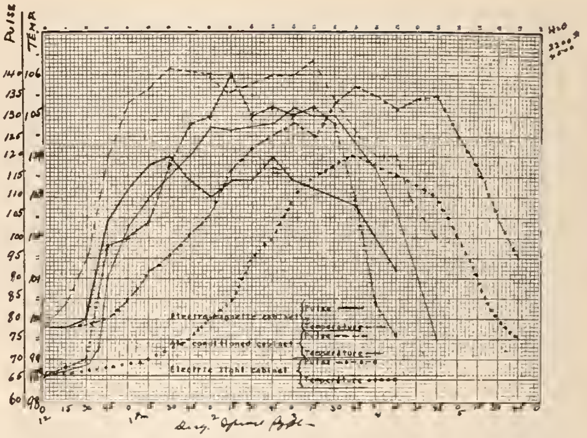

Fig. 7.—Temperature and pulse curves of same patient given treatment in three kinds of cabinets. Note in the Electro Magnetic Cabinet the temperature curve (marked in fine dots and crosses) runs much higher than the pulse (heavy black line). In the air-conditioned cabinet the pulse (in dashes) runs much higher than the fever curve (fine line). Note that in the electric high cabinet the pulse and temperature start much slower with the pulse (in dots and dashes) running much higher than the fever curve (in fine circles).

COMPARISON OF TREATMENTS IN THREE TYPES OF CABINETS

Treating patients in electric light, air-conditioned and electromagnetic cabinets, the comparable temperature and pulse curve are shown graphically in chart (Figure 7). The disadvantage of electric-light cabinet is that it takes too long to produce adequate fever, so that the patient is all tired out, restless, and nervous before the height of the temperature is reached. Secondly, throwing this type of heat into the body from without produces an undue amount of weakness in the patient, manifested by unusual rapid pulse, and the patient leaves the cabinet in a much more exhausted condition. Patients treated in the air-conditioned cabinet, with the temperature of the cabinet ranging from 140 to 160 degrees Fahrenheit, the required fever is arrived at in about the same time as with the electromagnetic cabinet, but the average pulse rate in a series of cases was twenty to thirty beats faster per minute in the former types of cabinet as compared with the electromagnetic type. Patients emerge from treatments in the Kimble (electromagnetic) in a far better condition, stronger, and more contented than those who are treated in either of the other two types of hyperpyrexia equipment. Another advantage of the electromagnetic type of cabinet is that it cuts short the duration and number of treatments required to obtain therapeutic results.

RESULTS OF TREATMENTS

Kahn-fast cases: number, 107; cured, 88. Kahn two plus, 8 cases. Unimproved, 8 cases. Cerebral spinal fluid positive, 48 cases, with high cell count, globulin present in decided amount, and high

Syphilis Treated With Hyperpyrexia and Chemotherapy

Type of Cases	Number of Cases	Blood Test Before Treatment Started	Blood Test After Treatment	Number of Fever Treatments	Type of Treatment Chemotherapy	Spinal Fluid Findings	Remarks
Kahn fast	82	49– 4 26– 3 7– 2	51 neg. 5– 4 8– 3 9– 2 9– 1	36 had 5 26 had 4 10 had 3 Temp. 105-107.8 for av. 5 hours	Sod. thiosulph. 3 injections Bismuth average 36 injections Proto-iodid pills gr. ⅓ t. i. d.	Negative	Acute syphilis requires higher fever and longer treatments than chronic syphilis.
Spinal fluid positive.	17	1– 4 2– 3 4– 1 10– neg.	2– 2 15– neg.	None	Weekly spinal drainage (2 millimeters). Tryparsamid bi-weekly; bismuth; iodids. Bismarsen .2 gm. Drugs given to tolerance.	Before treatment 10– 4; 3– 2; 4– 2 After treatment 5–3; 1–2; 11 negative.	All these cases showed positive globulin. Increase cell count and larger chlorid of gold curves. Five have relapsed since treatment stopped.
Cerebrospinal syphilis.	23	15–neg. 5–3 3–2 or doubtful	20– neg. 1 – 3 2 – 2	15– 7 F. Temperature 104 to 107.8 for 5 hours. Five received five treatments. 104 to 107 average 5 hours. One had partial collapse. Treatment discontinued. Two received three treatments. 103 to 104 average 5 hours.	Tryparsamid Bismuth Spinal drainage Drugs pushed to tolerance Bismarsen .2 gm. (Bismuth-arsphenamin—sulphonate). Given intramuscularly.	Spinal fluid before 5 – 4 16 – 3 2 – 2 All typical chlorid of gold curves c globulin and marked cell count.	Spinal fluid after 20 – negative 1 – 3 2 – 1 or doubtful All chlorid of gold curves improved or negative except those that did not finish treatment. All clinical symptoms improved.
		Nervous Symptoms 20 positive showings. 1 case hemolytic. loss sphincter control—completely cured, C negative blood and spinal fluid. Began c 4 blood 3 spine. Had 7 fever treatments and chemotherapy. All knee-jerks ab. 3 positive Babinski. 6 eye changes. 2 optic affections arrested.					

Results of Hyperpyrexia Treatment

	Number of Treatments	Time	Type	Adjunct to
1. Syphilis (all stages)	10 to 30 (10 in series)	1 a week to 2 a week	104 to 106.5 for 6 hours	Ars. and bis.
2. Chronic arthritis (nonspecific) 1. Atrophic 2. Hypertrophic 3. Mixed	10 to 30 continuous	1 a week to 1 every 2 weeks	102.5 to 103 for 6 hours	Vitamin D concen. 200,000 u. daily
3. Arthritis G. C.	3 to 5	1 a week	105 for 5 hours	Vacc. (Corbus-berry)
4. Acute articular rheumatism	3 to 5	2 a week	105 for 5 hours	Salicylates
5. Subacute rheumatism Arthritis	3 to 7	1 a week	104 for 5 hours	Salicylates
6. G. C. salph.	3	1 a week	105 for 5 hours	Vacc. (Corbus-berry)
7. G. C. prostatic complicated	5 to 7	1 a week	105 for 6 hours	Vacc. (Corbus-berry)
8. Acute G. C. Male or female (No complication) Preferably start first day of discharge	3 to 5	2 a week 1 q 4 days	105 to 106.5 for 6 hours	Vacc. (Corbus-berry)
9. Asthma	3 to 4	1 a week or 1 q 10 days	104.5 for 6 hours	Ca. ionization of nose Vitamin D concen. 50 to 200,000 u. daily
10. Hay fever	3 to 5	1 q 10 days	104 for 5 hours	Preseasonal ca. ionization 200,000 u. daily
11. Angina-neurotic edema, etc.	1 or 2	1 a week	105 for 5 hours	Restriction of fluids after Rx.
12. Chorea	3 to 4	1 a week	103.5 to 104 for 6 hours	Restriction of fluids after Rx.
13. Parkinson (Early)	10 to 30	1 a week	104.5 for 6 hours	Vitamin D concen. 200,000 u. daily

chlorid of gold curve. Average number of fever-heat treatments, 14. Gold chlorid curve, negative, 28. Improvement in cell count, globulin, and gold curve, 9. No improvement or discontinued treatment, 11. Neurosyphilis, 45 cases. All patients in this group who completed sufficient number of treatments were markedly improved from standpoint of manifested symptoms. Gold chlorid curve became negative in 18, the curve markedly lowered in 13. Slight improvement, 8. No improvement, 6. (Figure 8.)

CHEMOTHERAPY

In practically all of these cases, active treatment with bismuth, arsenic and iodid was followed. Indeed, tryparsamid three-gram doses, bismuth salicylate, and iodobismuthol were often pushed to tolerance. It has not appeared that it in any way affected the course of the patient's progress while giving the fever-heat treatment to also give the arsenic and bismuth medication directly before the hyperpyrexia, or in between the series. However, it has seemed unwise to us to burden the patient who is undergoing high-fever therapeusis, with heavy metals while he is under the influence of sedatives. Therefore, our practice has been to give the arsenic and bismuth between hyperpyrexia treatments. (Figure 9.)

CONCLUSIONS

1. Physical agents used for the production of artificial fever can be grouped in two classes: (*a*) Cabinets operating at temperatures lower than the temperature of the patient. (*b*) Cabinets operating at temperatures higher than the patient's fever.

2. With electromagnetic induction stimulating fever in a patient in a cabinet that has a temperature of only 100 degrees Fahrenheit, the pulse is twenty to thirty beats slower per minute, as compared with treatment in light and air-conditioned cabinets. With this magnetic induction type of treatment, the patient receives more rapid and satisfying therapetic results with less danger of heat collapse and shock.

3. A careful examination should be made of all patients that are to undergo fever-heat therapy, and only doctors and nurses who are thoroughly conversant with this type of therapy should administer such treatment.

4. Photographs of different types of cabinets have been presented, with charts showing comparative fever and pulse curves.

5. Acute syphilis responds stubbornly to fever heat, whereas all types of chronic cases, when given a sufficient series of hyperpyrexia treatments demonstrate remarkable improvement in over 70 per cent of the cases.

6. Active chemotherapy is administered in all chronic syphilitic cases along with fever-heat treatments.

7. With electromagnetic induction in the production of fever-heat treatment, the syphilologist had added greatly to his armamentarium of therapeusis.

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Flood Building, San Francisco.
Flood Building, San Francisco.

REFERENCES

1. Desjardines, Arthur U.: Fever Therapy, Arch. Phys. Therapy, 17:206-214 (April), 1936.
2. Neymann, Clarence A.: Discussion of Fever Therapy, Arch. Phys. Therapy, 17:215 (April), 1936.
3. Kobak, Disraeli: The Evaluation of Hyperpyrexia, Arch. Phys. Therapy, 16:481, 1935.
4. Potter, James E.: Hyperpyrexia in Wassermann-Fast Cases, Calif. & West. Med., 34:332, 1930.
5. Redewill, Francis H.: One Hundred and Thirty-Five Cases of Wassermann-Fast and Neurosyphilis, Treated with Diathermy and Modern Medication. Urol. and Cutan. Rev., 37:367-377 (June), 1933.
6. Simpson, Walter M.: Artificial Fever Therapy of Syphilis, J. A. M. A., 105:2132-2138 (Dec. 28), 1935.
7. Kendell, H. Worley, Webb, Walter W., and Simpson, Walter M.: Artificial Fever Therapy of Gonorrheal Arthritis, Am. J. Surg., 29:428-435 (Sept.), 1935.
8. Desjardines, Arthur H., Stuhler, Louis, and Popp, Walter C.: Fever Therapy for Gonococci Infections, J. A. M. A., 106:690-699 (Feb. 29), 1936.
9. Simpson, Walter M.: Present Status of Electropyrexia, Arch. Phy. Ther., 13 (Dec.), 1932.
10. Kuhns, Ralph H.: Fever Therapy in Dementia Paralytica: Its Status at State Hospitals of Illinois, Arch. Phys. Ther., 17:167 (March), 1936.
11. Bierman, William: The Treatment of Gonorrheal Arthritis by Means of Systemic and Additional Focal Heating, Am. J. M. Sc., 191:55, 1936.
12. Epstein, Norman W., and Cohen, Maurice: The Effects of Hyperpyrexia Produced by Radiant Heat on Early Syphilis, with a Description of a Simple Method of Producing Hyperpyrexia, J. A. M. A., 104:883 (March 16), 1935.
13. Extract of article by H. E. Kimble to be published.
14. Hines, Edgar A. J., and Brown, George E.: The Cold Pressor Test for Measuring the Reactibility of the Blood Pressure, Am. Heart Jour., 11:1, 1936.
15. Neymann, Clarence A.: Fever Therapy Discussion, Arch. Phys. Therapy, 17:206-214 (April), 1936.
16. Personal communication of Walter M. Simpson to Francis H. Redewill.

DISCUSSION

Rodney F. Atsatt, M. D. (1421 State Street, Santa Barbara).—The efficacy of the treatment of cerebrospinal syphilis through fever therapy produced by electrical means is so generally accepted as to need very little discussion. It is true that some authors still feel that there is an unexplainable malaria "toxin" which is specific for the treponema; but in most centers the artificial fevers are produced by electricity.

The problem is how to convert electricity into body heat or fever is a complicated one. Certain it is that several factors must be considered. The primary one is safety, as there must be no danger of burns either from contact or from eddy currents. The second factor is the ability to do exactly what you want in the process of heating; in other words facility, which will allow you to hold a predetermined temperature within a two-tenths degree range. The third factor is simplicity, which connotes the absence of all complicated mechanisms, and, fourth, the apparatus should be inexpensive.

Doctor Redewill's paper describes an ingenious mechanism for producing fever which depends upon the induction of an electromagnetic field. Judging it from our announced criteria, we think that perhaps the simple conditioned air cabinet may be superior and for these reasons. With a humidity of 70 per cent there will be little evaporation of perspiration, which means that droplets of salty water will be formed on the skin, and these will collect the eddy currents present in the electrical field, often to the discomfort and even danger to the patient. The facility of this mechanism is such that the flat plateau fever curves, where the temperature fluctuation is within a small range, are not often produced. (Incidentally, it may be noted that most conditioned air cabinets are operated at a temperature of from 120 to 125 degrees Fahrenheit, instead of 140 to 160 degrees as suggested.) In comparing the two devices as to simplicity and cost, the hot, moist-air cabinet needs nothing for its operation that cannot be purchased in an ordinary electrical store, while the Kimble method requires a source of electromagnetic induction currents necessitating a special mechanism.

However, entirely aside from this discussion as to method, Doctor Redewill is to be congratulated on a splendid piece of work on these Kahn-fast cases of syphilis. His reported results are excellent.

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Norman N. Epstein, M. D. (450 Sutter Street, San Francisco).—The authors are to be complimented for their interesting contribution to the subject of artificial fever therapy. A study of the different physical methods which have been introduced for the production of an artificial fever during the past seven years shows a great tendency toward the adoption of simple procedures for this purpose. There is no definite proof to show that a fever which is induced by short-wave diathermy, or radiothermy or other electrical means such as the inductotherm, is safer or more beneficial than the artificial fever which is produced by placing the patient in an air-conditioned cabinet and electric blanket, or by wrapping him in woolen blankets plus the addition of an external source of heat.

In all of these modalities a most important factor in the production of the artificial fever is the prevention of radiation of heat from the body surface.

I wish to add my word of caution to those of the authors that great care must be exercised in the administration of artificial fever therapy. This attitude is expressed in practically every recent communication in the literature on this subject. Regardless of the method used to induce artificial fever certain serious reactions may occur, the most dangerous being a sudden rise in temperature to an extremely high point, such as from 107.5 to 110 degrees Fahrenheit. When this occurs death may ensue, although as a rule the immediate use of measures to reduce the temperature will avert this casualty. This reaction can be prevented only where the person conducting the treatment is highly trained and thoroughly experienced in the modality being used. Secondary rises in temperature several hours after the treatment had been discontinued may also occur and must be watched for.

The therapeutic results obtained by the authors in the treatment of cerebrospinal syphilis and Kahn-fast syphilis by the combined use of chemotherapy and artificial fever therapy are striking. There is no doubt but that artificial fever therapy is a most valuable adjunct in these types of syphilis, particularly neurosyphilis.

Space does not permit of further discussion, but in closing I wish to emphasize the fact that artificial fever therapy should be a hospital procedure under the direction of a highly trained personnel. Under these circumstances artificial fever may be employed safely, and is a valuable adjunct in the treatment of neurosyphilis.

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Ross Moore, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Redewill's paper details three points which mark an advance in thinking concerning thermotherapy. First, he describes a method of treatment which appears to be safer than other electrofever methods; second, he shows that electrofever can be produced from within outward very easily without direct contact electrodes; third, the method he uses leaves the patient more comfortable than most other procedures—three valuable advances in treatment by means of artificial fever.

Since the paper is so well rounded out and complete, I shall confine myself to suggesting two additional points. The first of these relates to the use of fever treatment in late syphilis, including, under that term, all the sluggish manifestations of this disease. A considerable comparative experience leads me to conclude that electrically induced fever is not by any means the equal of malarial treatment. For, in my opinion, there is a certain biologic or specific reaction between plasmodium and spirochete, or between the products of their activity. This reaction does as much, perhaps even more than the coincident fever, to bring about recovery. Of course, there is room for sharp argument here.

The second point develops out of the more or less restricted type of cases which comes under my control, so-called "toxic cases" with sluggish appearing, nontransparent skins and other evidence of slowed or disturbed metabolism. Such cases frequently have a somewhat low-temperature range. In a large percentage of these cases a few fever treatments with mouth temperature, being pushed up only three or four degrees above starting point, are extremely helpful in clearing away toxic metabolites and eliminating symptoms. Such treatments are easily given, even in the home bathtub; and if properly supervised they are both devoid of danger to the patient and free from unpleasantness. I recommend a study of low fevers, as well as hyperpyrexias, to physicians who have among their patients examples of metabolic sluggishness and toxic metabolites.

CANCER CLINICS IN SMALL HOSPITALS*

By Zera E. Bolin, M.D.
San Francisco

Discussion *by Charles A. Dukes, M. D., Oakland; Gertrude Moore, M. D., Oakland; Orville N. Meland, M. D., Los Angeles.*

THE cancer situation in California is causing comment from the rest of the United States. According to statistics from the life insurance companies, the death rate from cancer in California is apparently rapidly increasing. The situation in San Francisco is especially alarming in that the death rate from cancer is one of the highest in the whole United States, there being probably only one city which exceeds San Francisco's death rate.

CANCER COMMISSION OF THE CALIFORNIA MEDICAL ASSOCIATION

This situation is being combated by the California Medical Association in various ways. Several years ago there was formed the Cancer Commission of the State Society. This Commission, under able leadership, has made considerable progress. The progress so far has been along the line of professional education. The Commission has sponsored conferences of pathologists and radiologists before each yearly meeting of the Association. It has collected, and published in book form, the consensus of over four hundred doctors in California dealing with cancer. It has sponsored cancer meetings in practically every county society.

THE GENERAL PRACTITIONER IS THE KEY MAN IN CANCER WORK

The need for this professional education is not as apparent at first sight as will be shown later. The number of cases of cancer seen yearly by the general practitioner in the smaller communities averages two a year. This number of cases of cancer does not allow the key man, the general practitioner, in the cancer situation to obtain a proper method of approach to diagnosis and treatment. The mental bewilderment of the man who first sees cancer is partly responsible for the unwarranted delay which occurs. In a large series of cases this delay averages five months before the patient seeks medical care and, strangely enough, it averages five months after the patient has sought medical care until adequate treatment is obtained. The cause of this delay is twofold. The patient who has been seeking medical care does not understand the nature and seriousness of the disease. The cause of the delay, after the physician sees the patient, is due to the inability of the doctor to decide, first, as to diagnosis and, second, as to treatment. Therefore, the doctor temporizes with the patient, and hopes against hope that the lesion is not cancer. The delay on the part of the patient can only be shortened by general public education; but it is not the purpose of this paper to discuss this phase. The delay after the patient has seen a physician can be materially changed by one of several means, the most important of which is professional education.

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* From the Department of Pathology, Mary's Help Hospital, San Francisco.

Read before the Pathology and Bacteriology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

EDUCATIONAL COURSES ON CANCER

The education of the physician in the natural history of cancer starts, of course, in the medical school. It would not be untruthful to say that there is no adequate course in cancer as a natural biologic phenomenon given in any medical school at the present time. The histology is given in the course on pathology. A few words about treatment are given by the surgeon and radiologist, but a comprehensive view is never afforded the student. The medical student in his intern year comes in contact with the actual handling of cancer cases, and this is his first chance to study cancer as it affects an individual patient. So the education of the physician should start in his medical school, and should continue throughout his intern and formative years. Adequate courses in cancer should be a part of the curriculum of every medical school.

The education of a nurse and her attitude toward cancer are of extreme importance. Schools of nursing should see that cancer is presented in the proper light as a preventable, curable disease in its early stages, and that late cancer can be treated so that the patient can live a fairly useful life.

The education of the hospital executives and the board of directors is of equal importance in order that adequate space, funds, and equipment may be supplied. The problem of making a hospital staff "cancer conscious" is not a hard one to solve. All of the elements for the diagnosis and treatment of cancer are available in practically every hospital. It is a question of coördination and use of facilities.

A HOSPITAL SHOULD HAVE A CANCER COMMITTEE

If the president of the staff will appoint a committee on cancer, the coördination can be started. The committee should consist of members of the various divisions of the staff treating cancer and, of course, the radiologist and pathologist. In every cancer committee, the pathologist is the key man. As the key man, the success or failure of the cancer clinic depends upon the pathologist.

The committee should organize, electing a chairman and a secretary. The secretary could easily be the intern on that particular service. The cancer committee then asks the approval of the staff to the proposition that all patients having tumors of any description be sent to the cancer committee for registration and diagnosis. If the patients are all clinic patients, this can be done without much difficulty. In some hospitals it will be practical for private patients to be also so referred to the cancer committee. An important distinction should be made as to treatment. In most hospitals it is preferable to have the patients registered, diagnosed and followed up, allowing the treatment to be given by the individual department from which the patient originates.

The cancer committee should have regular weekly meetings, and should report the scope of its work monthly at the staff meetings. The committee, in addition to seeing the patients for registration and diagnosis, should sponsor educational programs and report the result of all treatments given.

RECORDS OF CANCER PATIENTS

The records of such a committee may be in a very simple form. A small individual card for each patient should be made out, following an agreed upon system. The American College of Surgeons has forms which are available for use. The small card will include all pertinent data as to the patient's tumor, leaving the general examination to the department sending the patient. An index of patients should be kept by name and by disease, which would include a file of the parts involved and a file of the variety of tumor. An index of results of treatment and operations could be added.

FOLLOW-UP SERVICE

The follow-up of a patient is important. This can be done through the social service workers and through the nursing staff. The key man in the follow-up system is the secretary of the committee who should inform the patients of the time at which they are to report and supervise the social service.

The above scheme requires no additional funds. Each part of the scheme is taken from the facilities of the hospital now at hand. Funds, however, will come as soon as the staff and board of directors see the good work. These funds can be used for various purposes, but should be restricted to the employment of a paid secretary, if necessary, to buy supplies and to the hospitalization of early curative operative cancer.

EXPERIENCE IN MARY'S HELP HOSPITAL

The experience of the Cancer Committee in Mary's Help Hospital is illuminating. This is a small hospital of about 120 beds. It has an outpatients' clinic, averaging about one hundred visits daily. About three years ago the pathologist requested the president of the staff to appoint a cancer committee. This committee has been reappointed each year for the past three years, with additional members, so that now the committee has nine men. The committee comprises the pathologic, radiologic, and members of the medical surgical departments and of the various specialties. The committee has been recognized by the American College of Surgeons as a diagnostic cancer clinic.

For the first few months the attendance of the members of the committee was very scant, not averaging over three men. During the last year we have had an average attendance of over twenty physicians weekly. The new cases registered have risen weekly from one until, last year, we registered seven new cases weekly. There is an average attendance of patients of from twelve to fifteen weekly. The return visits account for most of this patient attendance. We find that we lose approximately 20 per cent of the patients registered.

The results of such a cancer committee are shown by the fact that in the three years we have seen over 350 tumor cases. We have educated, partly at least, fifty doctors. We have seen tumors of each part of the body from scalp to toenail. There is scarcely a tumor mentioned which has not been seen in our clinic. I feel that the committee will never be abolished as long as the physicians realize its need.

IN CONCLUSION

In conclusion, let me say that every hospital of one hundred beds or more needs such a clinic. The need is especially felt in the smaller communities. And this need can be filled by starting such a cancer clinic, when its educational facilities will be appreciated by everyone taking part in it.

490 Post Street.

DISCUSSION

Charles A. Dukes, M. D. (426 Seventeenth Street, Oakland).—I wish to congratulate Doctor Bolin on his timely comments on the cancer clinic in small hospitals. The California Medical Association and the American College of Surgeons have particularly sponsored this type of activity.

I am thoroughly convinced that the treatment of cancer is a group problem, but I do not fully agree with Doctor Bolin on the pathologist being the key man of the group, valuable as he is. The key man, if such a term could be used, is one who will devote his time and energy to the organization and create sufficient interest to keep the clinic in the position it deserves in the activities of the hospital.

We have found in our clinics at the Highland Hospital that the interest can very quickly dwindle if the organization becomes lax. Consequently, I believe that in selecting a chairman one should be given this important post who fully understands the hard work and faithful attendance required, and who will also appreciate that the clinic, to become a factor in the activities of the hospital, must be made interesting to all those who attend.

Doctor Bolin has emphasized the educational program in cancer and the importance of the general practitioner. His problem is the early diagnosis of cancer, and he must accept the responsibility also of the necessity of advising early treatment; also his attention must be called not only to prompt, but efficient treatment, and the close relationship between biopsy, diagnosis, and treatment.

Emphasis can also be given to Doctor Bolin's recommendation for complete records, a follow-up service, and the need for sufficient funds to carry out the important work that the cancer clinic represents.

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Gertrude Moore, M. D. (2404 Broadway, Oakland).—It is admitted by all who are familiar with the problem that the most urgent present-day need in cancer control is education of the medical profession, to the end that the highest degree of accuracy may be attained in diagnosis, and that adequate treatment may be applied without delay. In spite of this crying need, we continue to neglect the only plan which will accomplish the desired end, namely, that of bringing patients in large numbers to groups of physicians for the clinical study of cancer. Doctor Bolin's figures clearly show that the average doctor in general practice sees too few cases in a lifetime to gain sufficient experience for the satisfactory treatment of malignant disease, and in his confusion delays treatment for long periods. If the general surgeon is to render an acceptable service in the treatment of cancer, he must be given the opportunity to gain experiences with many cases of varied character. This is one of the most important accomplishments of cancer committees and cancer commissions, for they offer the opportunity to see and examine a wide variety of neoplasms and to follow patients treated by acceptable methods to their completion. In the present-day cancer clinics this work is limited almost entirely to indigent patients who receive the attention of a group of specialists, while in contrast the average private patient has the unsupported opinion of a man of very limited experience in cancer work. The essayist very clearly brings out this phase of the problem when he says, "In some hospitals it will be practical for private patients to be also referred to the cancer committee," implying that this is far from the rule. And, too, he suggests that treatment be left entirely with the patient's physician. It is no doubt wise and expedient at present to proceed in this way, but the fact remains that the private patient suffers because of the necessity for this arrangement.

For more than six years I have been intimatey associated with group cancer work as a member of the Alameda County Cancer Commission, consisting of a group of specialists who care for Alameda County's indigent cancer cases. During this time we have studied about three thousand cases of cancer. It has become increasingly apparent to all of us that the best treatment can only be obtained after careful, and often repeated discussions by the entire group. Many of the physicians of this city, realizing the advantages of this work, have on occasions requested the Cancer Commission to review private patients for them. This, of course, is not possible in a county clinic, but it has perhaps prompted a move, at present on foot in one of our private hospitals, to establish a cancer committee somewhat along the line suggested by Doctor Bolin, but with perhaps a little bolder purpose, in that it is applied entirely to private patients, there being no free cases in this institution. It is an experiment and may fail for reasons that have been so frequently pointed out; but there is an encouraging, whole-hearted enthusiasm on the part of staff members. Time alone will tell whether or not such a plan can be put into practice among private patients. The move is entirely educational, prompted by the desire of those of us who have seen the benefits of group practice, as it has been applied to clinic cases, to extend these benefits to a wider circle of doctors and their patients. I would, therefore, like to add my appeal to that of Doctor Bolin, that all who are interested in the cancer problem aid in stimulating group-cancer study, to the end that advances in the diagnosis and treatment of this disease may keep pace with scientific advancement in other fields of medicine.

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Orville N. Meland, M. D. (1407 South Hope Street, Los Angeles).—As we see it today, the cancer question is a matter of education. Despite the fact that surgery and radiation cure a large number of patients, the laity and some members of the profession are still pessimistic and feel that once cancer is diagnosed nothing can be done. This is true if the patient seeks advice in the terminal stages of the disease. The solution, therefore, is dependent on the dissemination of the true facts regarding early diagnosis and treatment. The Cancer Commission, recognizing the need for professional education, has been carrying out such a program with a measure of success. However, as Doctor Bolin says, this is only half the battle; it must be carried to hospital executives to make them cancer-conscious in the hospitals where they have control, and to nurses who, in our experience, are woefully ignorant of the course of cancer and its adequate treatment. It is surprising the number of people who question a nurse about their ills before seeing a physician. An enlightened nursing personnel may often get a skeptical patient started on the right track rather than being shunted into the hands of the irregular cults, who promise much but accomplish nothing.

Perhaps the best way to influence doctor and patient alike is through the cancer clinic established in the various hospitals. In public hospitals it is easy to make a rule that all cancer patients or suspected cancer patients must be seen by a board of physicians and surgeons who are interested in the diagnosis and treatment of cancer. In the private hospital such a rule would not work out, as it will interfere with the right of the individual doctor to practice as he sees fit. The younger men with limited experience will send patients for an opinion, but the older surgeons will not do so.

In order to get around this the members of the tumor clinic of the California Hospital are indexing all cancer patients that come to the hospital, and are instituting an adequate follow-up; from this the end-results of treatment may be computed. Then Doctor Maner presents the autopsy or operative material, discussing the diagnosis and treatment. This opens up the case for argument as to its proper handling, and why the treatment was or was not successful. Such a procedure will result in a slow but steady improvement in end-results.

Personally, I am not prepared to advocate cancer clinics in all small hospitals. While such a program is theoretically correct, the number of patients seen will be very small. To my mind, it seems much more logical to have clinics in a few large hospitals where patients may be sent and where outside physicians may see a variety of material. Too many small clinics with limited clinical material will result in lack of interest of the staff, but a few well-directed clinics will easily result in growth and progress.

FALLACIOUS TRENDS IN PSYCHIATRY*

By William Edler, M.D.
Pasadena

Discussion *by George Dock, M.D., Pasadena; Edward W. Twitchell, M.D., San Francisco; H. Douglas Eaton, M.D., Los Angeles.*

In the fundamental sciences, mathematics, physics, chemistry, etc., knowledge is admittedly known, unknown, or in a hypothetical or theoretical state. Wary, through the ages of experience, scientists apply rigid rules to test the truth or falsity of any conclusion, and to the speculative sphere are relegated such phenomena that do not come within the provable class. No emotional content enters the analysis, and negative results are recorded with the same indifference and given the same values as are the positive.

INHERITED METHODS OF APPROACH

How different in medicine! Here the trend is to know everything, to label maladies with a symptom nomenclature, hoping by a multiplicity of terms to conceal ignorance and sophistical reasoning. There is a historical background for this: the physician is a direct descendant of the ancient medicine man, whose diagnostic and therapeutic ability depended upon his theologic rather than his intellectual attainments. Since he was working through, and with both omniscient and omnipotent powers, and purported to be the direct agent of this dual force, it is evident that limitations of his capacity in any sphere were inevitably denied. The basic science man accumulated sufficient facts to discredit this imposter's power to interpret happenings, past, present or future, resulting in a divorcement from, and a fear of reconciliation with, his erstwhile associate.

On the other hand, our modern medical man still tends toward the occult, still pretends knowledge he does not possess, still heals by drug incantations and with the slogan *post hoc, ergo propter hoc* reverts back to his mystic ancestry. Smugly, his ignorance is masked by labels, terms and symbols: unknown diseases are called functional—uncured diseases are treated by substituting for the patient a laboratory symbol, and great satisfaction or disappointment is evidenced over the algebraic fluctuations from minus to positive signs. One must get laboratory improvement even though attended with clinical dissolution.

PSYCHIATRY'S HANDICAPS

If this be true in general medicine, how emphatically is it true of psychiatry! Some seven schools of diagnostic and therapeutic thought are represented at this time in the psychiatric field, ranging from the occultism of Christian Science, Oxfordism, Freudianism, and what not, to the fields of endocrinology, biochemistry, genetic, environmental, physiologic, and organic groups. By a six-to-one vote each would be eliminated from the field were a poll taken to determine the scientific status of any one of the particular schools of thought, each group uniting to vote the other wrong. The crux of the problem is that no standard has been or is established by organized medicine which would promote criteria whereby fallacies, theories and downright quackery could be controlled by exacting scientific diagnostic, and therapeutic standards applied to psychiatry as it tends to be applied to internal medicine and surgery. Recovery from an illness cannot be used as an argument for the merit of the treatment; and only by hundreds of controls can any scientific evaluation be placed on the efficacy of any drug or any other treatment, be it in the so-called mental sphere or the physical realm.

It is the mental category that primarily concerns us. We use the term glibly, but who is going to define it. If we mean by mental a resultant thought process due to interactivity of certain brain cells that culminates in sensory reaction with ultimate muscular movement or absence of movement, then we have at least a relative criterion for conduct—so-called normal or abnormal. After all, basically, we are concerned with sensation. This is particularly stressed, because it leads us to the definite field of psychogenetic etiology and a school of psychiatry that has been popularized with the medical profession and particularly with the lay public. Disregarding the controversial concepts among leading exponents of this particular school, let us attempt a comparative study of so-called mental physiopathology with physical physiopathology and see where we land. We are asked to believe that maladjustment—*i. e.*, painful thought experience—is the cause of bizarre conduct, *i. e.,* maladjustment; or, in other words, that psychic pain, the resultant of cerebral dysfunction, is the cause of psychic pain attended with pathologic muscular activity (abnormal conduct), which in turn we designate a psychosis. This is hardly logical. As illogical as propounding that albumin in a urine specimen is the cause of nephritis. When we approach such psychotic phenomena as hallucinations and delusions, detailed argument is advanced by our theorists to show psychic defensive mechanisms that produce these subjective effects, forgetting, by your leave, the simple fact that one-fiftieth of a grain of hyoscin or a few ounces of alcohol will produce the same result.

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* Read before the Neuropsychiatry Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

THE PSYCHOSES

When we consider that the psychoses are a tremendous liability on the social and economic structure, I believe it is time for organized medicine to include in its department of "new and unofficial remedies" the various therapeutic claims made by organized groups of psychic healers. Newspapers have been used where Freudian columnists have answered the wails of the afflicted whom they had never seen, with, at least in one instance to my knowledge, the charlatanry of the patent-medicine quack, the advice to "read my book," or Mae West-like, "come up and see me some time."

VOLUMES ON MENTAL DISEASE—FOR LAYMEN

What would the reaction of the internal section of this society be to an internist who wrote a treatise for the lay public on "How to treat your kidney disease." Yet book-shelves are cluttered up with volumes of advice to laymen on mental disease, a problem far more complicated, much more difficult to interpret than the aforementioned malady. We permit it for one reason, and that is that we are still hazy in our notion that mental disease is something distinct from physical reality. We are still mesmerists, Christian Scientists, Oxfordists, or whatnots, following the principle that in some way, we do not know how, the patient is to blame for a condition that our ignorance cannot fathom. If we do not know, since we are the descendants of an all-knowing clan, certainly the patient must still be in demoniac possession.

IN CONCLUSION

In conclusion, this paper is a plea for the application to psychiatry of the same standards that are applied to any other branch of medicine, or, for that matter, to any other science. Let us have our psychiatric hypotheses and theories, and fight them out in our meetings. Let us outlaw any physician who goes to the laity with psychiatric cures, just as we discipline the surgeon or the internist who violates the decencies of his ethical code.

Finally, can we not gain—those of us who deal with the mentally afflicted—the laity's confidence and esteem to a greater degree by swallowing our pride, gritting our teeth, and answering mother's question, "What on earth has caused Mary's breakdown, doctor?" by the simple, honest reply, "I do not know."

Some day, somewhere, in the laboratory, something will develop that, over night perchance, will expunge from the medical literature the fantastic interpretation of the so-called functional psychoses and substitute therefor the factual findings of a persistent and enterprising research man.

595 East Colorado Street.

DISCUSSION

George Dock, M. D. (94 North Madison Avenue, Pasadena).—Doctor Edler has given us a concise and accurate statement of the past and present bases of thinking and acting in medicine. Perhaps he is correct in thinking progress in psychiatry is less satisfactory than that in other departments of medicine and surgery; but, on the other hand, it may be that he overrates the situation in some of these other branches. His suggestions for improvement are interesting. An excellent one is to carry on greater activity in the discussion of hypotheses and theories—"fight it out in meetings." The idea of more active discussions might well be applied in some other sections beside that of psychiatry. A more questionable suggestion is the idea of outlawing physicians who propagate psychiatric cures and publish books for self-treatment. In doing this, is there not a new danger in giving the outlaw all the glamor of a martyr and publicity? The suggestion that physicians should avoid mystification and give honest replies, such as "I don't know," is good as far as it goes. But in the example stated, should not the physician go on and indicate to Mary's mother and to Mary, if possible, the knowledge and resources he has that might be applied to the case? Doctor Edler's whole argument is very fine for experts, but can it be applied to a population that destroys crops in order to make food more accessible, that spends to save, that urges pulling one's self up by bootstraps, etc.? Coming especially to psychiatry, how can we apply the methods of a medical society to a population fed daily with columns of the antics of a poor dement with alcoholism, who is written up as a "prankster" or "funster," when he needed all the best efforts of nurses and physicians? Such a man gets more attention from the public and probably influences more minds than a Millikan or an H. G. Wells. At all events, we physicians can cultivate our own gardens, direct patients and the public generally to honest experts, and so in time raise the level of accurate thought and practice.

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Edward W. Twitchell, M. D. (909 Hyde Street, San Francisco).—One may readily agree with some of Doctor Edler's propositions, if not, however, with all of them, except in part.

It is quite true that medicine is not an exact science. Present-day discussions of the physicists would lead one to believe that there is no such thing as an exact science, but medicine never has made any pretense to being exact, and for that matter it has always been pretty freely admitted that medicine was an art in a very large part and only gradually becoming a science.

As to the psychiatrists being the worst of the lot, it may be advanced that they have been too modest in self-defense. It is true that hospitals for the insane all over the land are filled with patients whom psychiatry is not curing. There are also an enormous number of the tuberculous and cancerous, and those with hypertension and those suffering from nephritis or from hepatic cirrhosis, and from leukemia and a long list of other things belonging to the physician and surgeon which are not being cured any better than the psychiatrists are curing their patients. The trouble with the psychiatrist's patient is that he is so exceedingly obvious. He cannot go about the streets without attracting attention, as can so many of those having the diseases above mentioned.

Therapy in psychiatry is said to be ineffectual. It is unfortunately true, and one is inclined to agree with Ross when he says that psychoses get well of themselves, if they do at all, not by reason of what the physician has done; but he also says that the psychoneuroses can be cured, and the psychoneuroses form a very large part of psychiatric practice, and to the psychiatrists belong the credit of the great advance in the treatment of general paresis. Mental mechanisms are still a woefully dark field, and there is no school which can at present claim to have solved this problem.

When it comes to governmental control of psychic healers, which seems to be advocated in Doctor Edler's paper, that is treading on very, very dangerous ground. One is apt to get mixed up in a religious controversy for one thing, and even if one does not, how can a state which cannot control automobile or liquor traffic control psychic healers?

We are still empirics and shall be for a long time to come; but we are measurably better off than our grandfathers and far more prone to confess our ignorance frankly and freely than were our grandfathers.

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H. Douglas Eaton, M. D. (1136 West Sixth Street, Los Angeles). — Psychiatry has been slower to emerge from the clouds of ignorance and superstition than other branches of medicine. While Hippocrates clearly recognized mental disorder as a disease due to physical causes, many factors combined to retard the development of a truly scientific viewpoint in regard to the psychoses. In fact, it was not until recently that much was accomplished along these lines.

The present century has seen definite progress in the scientific approach to psychiatric problems, even though there is still room for great improvement. Twenty-five years ago the percentage of "functional" psychoses made up 90 to 95 per cent of the total. Today 30 to 40 per cent of psychiatric cases are recognized as due to structural or organic changes. With the growth of biochemistry and the allied sciences it seems reasonable to expect that the "purely functional" psychosis will gradually vanish. Such a result, as Doctor Edler points out, will only be attained as the result of applying the same rigid rules of investigation as prevail in any science. No speculative or purely subjective theorizing will yield satisfactory results.

Many factors still remain to handicap the cultivation of a truly scientific viewpoint in psychiatry. For example, in many states, including our own, the law places the final diagnosis of insanity in the hands of a jury of laymen; yet even the law would not expect a lay jury to diagnose a case of pernicious anemia or appendicitis. Backed by this legal approval, many of the laity, especially the poorly educated and ignorant, consider that psychiatric problems—actually the most difficult of medical situations—are well within their powers to diagnose and treat. This generally prevailing lay attitude complicates greatly the proper medical care of the psychoses.

Because of the lack of scientific evidence, faddists within and without the medical profession have originated this or that theory to explain mental disease and have broadcast these theories to receptive audiences. Practitioners of the most popular fad within the profession have never published any adequate statistical studies of their therapeutic results, and its exponents usually explain any disagreement with their methods as due to the presence of a hidden disorder in the one who disagrees with them: if you do not believe as I do, then there is something wrong with you! Surely, such lack of the ordinarily accepted rules of scientific research stands in the way of scientific advancement.

Articles on psychiatric subjects by so-called experts, both lay and medical, flood our magazines and the daily press. Radio experts solve psychiatric problems and give advice freely over the air, with the result that those of us who are dealing daily with psychiatric cases must spend a large percentage of our time removing misconceptions before we can establish adequate therapy.

Psychiatry has been further handicapped by a tendency to become overly involved in terminology and classification. This tendency is fortunately subsiding, and we are learning to approach each case as an individual problem, realizing that only through a complete gathering and evaluation of all factual data can we hope to advance psychiatric knowledge and therapy.

THERAPEUTIC SCOPE OF CHIROPRACTIC: A LEGAL BRIEF*

No. 257362

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE CITY AND COUNTY OF
SAN FRANCISCO

In the Matter of the Application of M. James McGranaghan, for Declaratory Relief, Plaintiff, vs. Dora Berger, Intervenor and Defendant, vs. Roy B. Labachotte, Intervenor and Defendant, vs. The People of the State of California, Intervenor.

BRIEF OF INTERVENOR, THE PEOPLE OF THE STATE OF CALIFORNIA

STATEMENT OF QUESTIONS INVOLVED

In the matter at bar the petitioner sought a declaration of his rights and duties under a license to practice chiropractic claimed to be issued pursuant to the provisions of the Chiropractic Act. He alleges graduation from a chiropractic school, but does not allege graduation from a legally incorporated chiropractic school or college, an essential under Section 8 of the Chiropractic Act, Statutes of 1923, page lxxxviii. The petition alleges, however, that he is licensed to practice chiropractic, alleges a conflict exists between persons licensed under the provisions of the Chiropractic Act and persons licensed under the provisions of the Medical Practice Act, Statutes of 1913, Chapter 354, as amended, and licensed chiropractors; and that he is in constant danger of prosecution under the provisions of the Medical Practice Act should he render services in excess of his license, and that he is likewise in a position of jeopardy should a civil action be brought against him for rendering services in excess of his authorized practice.

In paragraph 5 he seeks a construction of Section 7 of the Chiropractic Act to prevent, as he states, "the continued conflict and controversy now existing." He sets forth Section 7 of said Chiropractic Act, which reads as follows:

> Sec. 7. One form of certificate shall be issued by the board of chiropractic examiners, which said certificate shall be designated "License to practice chiropractic," which license shall authorize the holder thereof to practice chiropractic in the State of California as taught in chiropractic schools or colleges; and, also, to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body, but shall not authorize the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in materia medica.

and alleges that the college of which he is a graduate now teaches, and at the time of the adoption of the Chiropractic Act and prior thereto, taught the following enumerated subjects:

> Anatomy, embryology, physiology, chemistry, toxicology, histology, pathology, neurology, bacteriology, physical diagnosis, laboratory diagnosis, palpation or spinal diagnosis, nerve tracing, chiropractic technique, symptomatology, special technique including replacing shoulder, hip, rib and foot subluxations and dislocations, obstetrics, gynecology, pediatrics, first aid and minor surgery, terminology, hygiene and sanitation, treatment of diseases of the eye, ear, nose and throat, dietetics, psychiatry, x-ray, jurisprudence, mechanotherapy and massage, medical gymnastics, hydrotherapy, colonic therapy, physio-therapy, electro-therapy, photo-therapy, and practice building.

Paragraph VII recites that all of these enumerated subjects and other additional measures are, and were at the time of and prior to the adoption of the Chiropractic Act, taught as *chiropractic* in other chiropractic schools and colleges.

Paragraph VIII of the petition improperly alleges that the District Court of Appeal in the case of *Evans* vs. *McGranaghan*, construed Section 7 of the Chiropractic Act "as authorizing license holders thereunder to practice chiropractic and to use all necessary mechanical hygienic and sanitary measures taught as chiropractic in chiropractic schools and colleges,

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* See also editorial comment concerning this case, printed on page 380 of this issue. The Court Opinion is printed on page 419 of this issue.

> "together with any other such necessary mechanical, hygienic and sanitary measures the use of which would not constitute the practice of medicine, surgery, osteopathy, dentistry or optometry, nor involve the use of any drug or medicine now or hereafter included in materia medica."

It is obvious that if the case of *Evans* vs. *McGranaghan* construed what this pleading alleges was construed it would be unnecessary for the petitioner to ask this court to make a finding as to what was there decided.

In said paragraph VIII it is alleged that the term "practice of medicine, or surgery" is indefinite and uncertain, subject to two or more contrary and conflicting interpretations.

By reason of the uncertainty of petitioner and his danger of criminal prosecution and liability for negligence as a result of what petitioner calls "contrary and conflicting interpretations" of the term "practice of medicine, or surgery," it is, in paragraph IX of said petition, alleged that this court should grant him declaratory relief to determine the interpretation of said term "practice of medicine, or surgery," as used in the Chiropractic Act.

Petitioner also seeks declaration of his rights and duties as a license holder under the provisions of the Chiropractic Act and prays for certain stated relief.

To the petition filed by McGranaghan one Dora Berger intervened and alleged chiropractic licensure in California, an adverse interest to petitioner, the possibility of her scope of practice being affected by the proceeding and the fact that no trial thereof had occurred.

She admitted that all of the subjects or measures set forth in paragraph VI of the petition were, at the time of the filing of her complaint in intervention, taught, and previous to the enactment of the Chiropractic Act had been taught, in chiropractic schools and colleges. She denied that any of the subjects or measures are authorized to, or within the practice of a chiropractic licentiate in California except "palpation or spinal diagnosis, nerve tracing, chiropractic technique, x-ray, hygiene and sanitation." She alleged that the remainder of the subjects referred to in said paragraphs were exclusively within the scope of practice of a drugless practitioner or physician and surgeon, both licensed pursuant to the provisions of the Medical Practice Act, and that the practice of such subjects was not authorized to a chiropractic licentiate, was beyond the scope of chiropractic practice and was detrimental to her practice and to her rights. Whereupon, she asked for an interpretation of the Chiropractic Act as not authorizing the use of such subjects and measures.

Based upon certain statements in the case of *Brix* vs. *Peoples Mutual Life Ins. Co.*, 18 Pac. (2d) 103, to wit: the People of the State of California asked permission to, and were granted permission to intervene in said proceeding. The state's theory in so doing was based upon the fact that all licenses granted to practice any form of the healing arts spring from the right of the people to protection from being mistreated or misled by incompetent or unscrupulous licentiates. (*State* vs. *Armstrong* (Idaho), 225 Pac. 491.)

It was and is our view that the individual members of society are entitled to know just exactly how far a person holding a qualified license may prescribe or render treatment. As, for example, no one would seriously contend that a dentist has the right to remove a brain tumor.

The people's intervention admitted the existence of a conflict as to the scope of practice authorized chiropractors, denied the existence of an actual controversy between those licensed under the Medical Practice Act and those licensed under the Chiropractic Act, and alleged the existence of actual controversies between certain persons licensed pursuant to each of said acts. The people's intervention admitted that the petitioner, McGranaghan, was in constant danger of criminal prosecution for rendering services in excess of his authorized practice, as well as admitted that his position would be one of great danger in the event of a civil action for negligence in the use of any measure outside his authorized practice.

The propriety of an interpretation of Section 7 of the Chiropractic Act was also admitted. Paragraph V of the people's answer in intervention denied that the National College of Chiropractic, from which petitioner alleged graduation, taught as chiropractic any of the subjects enumerated in paragraph VI of petitioner's complaint, except "palpation or spinal diagnosis, nerve tracing and chiropractic technique."

Our answer denied that the expression "practice of medicine and surgery" is now or was in the year 1922 (the year the chiropractic initiative was enacted) indefinite or uncertain or subject to two or more contrary and conflicting interpretations.

The people likewise traversed the answer in intervention filed by Dora Berger, though agreeing in the main therewith. We alleged, however, that certain other licentiates than those enumerated by her could do some of the things which she alleged could be done only by a physician and surgeon or a drugless practitioner. As for example, that chiropodists and midwives might perform certain of said acts.

Thereafter the people made further answer to the petitions of McGranaghan and Berger and sought *affirmative relief*. Our allegations were, briefly, that chiropractors might engage in palpation, spinal diagnosis, nerve tracing, chiropractic technique, chiropractic hygiene and chiropractic sanitary measures, but could not engage in any other method of treating the sick or afflicted. We asked that this court determine:

> 1. What was chiropractic as taught in chiropractic schools or colleges at the time of the adoption of said Chiropractic Initiative Act?
>
> 2. What necessary mechanical, and hygienic and sanitary measures incident to the care of the body, if any, may be used by the holder of a license to practice chiropractic in the State of California?
>
> 3. What, if any, were, in 1922 or thereafter, the mechanical, and hygienic and sanitary measures incident to the care of the body which are not included within the practice of medicine, surgery, osteopathy, dentistry or optometry, or which did not involve the use of any drug or medicine included in materia medica?
>
> 4. That all methods of treatment, save and except those which are chiropractic within the purview of the Chiropractic Initiative Act of California, constitute the practice of medicine, surgery, osteopathy, dentistry or optometry.

A fourth intervention was filed by Roy B. Labachotte, a chiropractic licentiate, who alleged that the doing of all of the things objected to by the State were not chiropractic and were not, prior to or after the adoption of the Chiropractic Act, taught as such, and that the practice of chiropractic consisted solely and not otherwise in:

> the adjustment of subluxations or misalignments of the segments of the spine when such subluxations or misalignments cause occlusions of nerves and interference with the transmission of nerve force at or within the spinal column, together with necessary mechanical and hygienic and sanitary measures incident to the care of the body in said practice of chiropractic.

Labachotte further alleged that until Section 7 of the Chiropractic Act is interpreted he and others would continue to practice beyond the lawful scope of practice under the Chiropractic Act, and prayed that the petitioner, McGranaghan, be denied the relief sought, and that he, the intervenor, have judgment construing Section 7 in accordance with the allegations of paragraph IV of his complaint in intervention.

RELATIVE TO THE RELIEF SOUGHT

Whether an application for declaratory relief is proper, is questionable. This was pointed out to the court at the commencement of this proceeding by the intervenor, People of the State of California. . . .

IS CHIROPRACTIC SOMETHING DEFINITE?

The above, we believe, sets forth the issues before this court. We, therefore, seek primarily to ascertain *"What is Chiropractic?"* In approaching the solution to the question we are not bound solely by the language used in *Section 7* of the Chiropractic Act. According to the following cases the Act must be construed as a whole so as to promote and not defeat the general purposes and policy of the law. . . .

We do *not* contend that the entire Act is unconstitutional and that the approximately twenty-eight hundred chiropractors in California are without the right to practice chiropractic. We contend that the Act is constitutional and that persons licensed pursuant thereto can practice *chiropractic* (whatever chiropractic is), but we insist that a person licensed under the Act can do no more than practice chiropractic, a definite and specific branch of the healing arts. . . .

Section 7 of the Act provides:

> One form of certificate shall be issued by the board of chiropractic examiners, which said certificate shall be designated "License to practice chiropractic," which license shall authorize the holder thereof to practice chiropractic in the State of California as taught in chiropractic schools or colleges; and, also, to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body, but shall not authorize the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in materia medica.

We urge that the prohibitory language contained in Section 7 of the *Chiropractic Act* means exactly what it says. By way of mandate it states a license to practice chiropractic

> *shall not authorize* the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in materia medica.

A legal mandate is stronger than a proviso and the latter is held in this state to be a covenant and condition precedent to the right to be exercised. . . .

DEFINITIONS OF PROHIBITED PRACTICES

Medicine

Section 17 of the Medical Practice Act provides:

> Any person who shall practice or attempt to practice, or who advertises or holds himself out as practicing, any system or mode of treating the sick or afflicted in this state, or who shall diagnose, treat, operate for or prescribe for any ailment, blemish, deformity, disease, disfigurement, disorder, injury, or other mental or physical condition of any person, without having at the time of so doing a valid, unrevoked certificate as provided in this act, or who shall in any sign or in any advertisement use the word "doctor," the letters or prefix "Dr.," the letters "M.D.," or any other term or letters indicating or implying that he is a doctor, physician and surgeon, physician, surgeon or practitioner, under the terms of this or any other act, or that he is entitled to practice hereunder, or under any other law, * * * shall be guilty of a misdemeanor and upon conviction thereof shall be punished as designated in this act, * * *

From this it would appear that the Medical Practice Act covers *any and all* systems or modes of treating the sick or afflicted. Hence it may be said that the practice of medicine is and was in 1922 defined by statute.

This is further indicated by the language of Section 8 of the Medical Practice Act, which provides for the issuance of various certificates. The section provides in part that:

> * * * a certificate authorizing the holder thereof to use drugs or what are known as medical preparations in or upon human beings and to sever or penetrate the tissues of human beings and to use any and all other methods in the treatment of diseases, injuries, deformities or other physical or mental conditions, which certificate shall be designated "physician and surgeon certificate"; * * *.

How the expression "any and all" methods in the treatment of diseases came into the Medical Practice Act shows the statutory development of medicine and surgery in this State. In the case of *Ex Parte Greenall,* 153 Cal. 767, determined in June, 1908, the petitioner sought a writ of *habeas corpus* after conviction upon a complaint charging violation of the Statutes of 1907, page 252, being entitled:

> An act for the regulation of the practice of medicine and surgery, osteopathy, and other systems or modes of treating the sick or afflicted, in the State of California, and for the appointment of a board of medical examiners in the matter of said regulation.

It should be stated that the writ was granted and the petitioner discharged solely because of the language of the complaint. The Court pointed out the history of the statutes regulating the practice of medicine and surgery and state: . . .

From this it is evident that the Act of 1901 defined what constituted the practice of medicine specifically; that the Statutes of 1907 had as broad a meaning as had the Act of 1901 and that the present Act of 1913 is more broad than either of the said acts for the reason that it includes *any and all* methods of treating the sick or afflicted. It may, hence, be said that the Legislature has defined the practice of medicine.

We must follow what our statute defines as the practice of medicine. (*Foo Lung* vs. *State,* 84 Ark. 477; 106 S. W. 946.)

If evidence be needed as to what constitutes the practice of medicine, the testimony of Dr. Ebright, Dr. Rixford, Dr. McKenny, Dr. Langnecker, Dr. Morrell, Dr. Vecki, and Dr. Ruggles certainly covers the situation. Their testimony is to the same effect as is our law and as are the adjudicated cases. In other words, every method that can be used for the alleviation of suffering, the prevention of disease, the correction of a physical or mental condition, is included in the sphere of medicine. (*Commonwealth* vs. *Jewelle,* 199 Mass. 588; 85 N. E. 858.)

Surgery

Surgery is included in our statutory definition. In Section 8 of the Medical Practice Act is the expression "to sever or penetrate the tissues of human beings and to use any and all other methods in the treatment of diseases, injuries, deformities, or other physical . . . conditions."

It may likewise be said to be included in Section 17 of the last mentioned act, where an unlicensed person is prohibited from "operating for any ailment, blemish, deformity, disease, disfigurement, disorder, injury, or other mental or physical condition." A type of surgery is included in the art of chiropody. Section 8 of the Medical Practice Act permits certain surgical treatment to be given by a chiropodist, to wit: the surgical treatment of abnormal nails, corns, callosities, bunions and other minor foot ailments not involving the bony structure, and does not confer the right of amputation of toes or joints thereof, except as hereinbefore specified, or any portion of the foot or the severing of any tendon or the use of any anesthetic other than local. Hence it may be said that all forms of surgery are defined by the Medical Practice Act.

The testimony of the experts called on behalf of the State is entirely in accord with the definition of surgery in the Medical Practice Act. Doctor Rixford, it will be recalled, testified that the so-called manipulation of the vertebra of the spine was a surgical operation, although no cutting was done therein.

Osteopathy

The practice of "osteopathy" as that term is used in the Initiative Act, is prohibited to a chiropractor. It is to be noted that the Chiropractic Act does not say that a licensed chiropractor is not to do the things which an osteopath is entitled to do under the law, but says such a licentiate shall not practice osteopathy. Because of the fact that counsel for the intervenor, Labachotte, disagreed in oral argument with counsel for the State as to the meaning of the word "osteopathy," we make the above distinction, because we believe that the people, in voting for the chiropractic initiative, intended to refer to the science of osteopathy rather than to the rights of an osteopath under the law. We concede that the legislature might grant rights to persons holding particular licensure, which could be either in excess or less than such persons were taught. As an example we concede that the legislature could—though we doubt that it would—permit chiropodists to engage in unlimited surgery upon a human being below the ankle. Should it do so the legislature would not change the definition of the word "chiropody," but would merely grant increased rights or privileges to a chiropodist.

It is, therefore, our contention that the expression "osteopathy" used in Section 7 of the chiropractic initiative means osteopathy as the same was theretofore known and in this connection we cite *In re Nowak,* 184 Cal. 701, to the effect that expressions which have theretofore been construed by the Supreme Court and which are later used in an initiative or statutory enactment must receive the interpretation theretofore approved.

In the following cases osteopathy has been defined: . . .

Dentistry

Dentistry is and was defined in the Dental Law of California. It is defined in Section 11 as follows:

> A person practices dentistry within the meaning of this act who (1) by card, circular, pamphlet, newspaper or in any other way advertises himself or represents himself to be a dentist, or (2) for a fee, salary or reward, paid directly or indirectly either to himself or to some other person, performs, or offers to perform, an operation of any kind, or treats diseases or lesions of the human teeth, alveolar process, gums or jaws, or corrects malimposed positions thereof, or (3) in any way indicates that he will perform by himself or his agents or servants any operation upon the human teeth, alveolar process, gums or jaws, or in any way indicates that he will construct, alter, repair, or sell any bridge, crown, denture or other prosthetic appliance or orthodontic appliance, or (4) makes, or offers to make, an examination of, with the intent to perform or cause to be performed any operation on, the human teeth, alveolar process, gums or jaws, or (5) manages or conducts as manager, proprietor, conductor, lessor, or otherwise a place where dental operations are performed. The following practices, acts and operations, however, are exempt from the operation of this act: (a) The practice of oral surgery by a licensed physician, etc.

Optometry

Optometry is and was defined by statute. Chapter 598 of the Statutes of 1913 (this section has never been amended):

> Section 2. The practice of optometry is hereby defined to be the employment of any means other than the use of drugs for the measurement of the powers or range of human vision for the determination of the accommodative and refractive states of the human eye or the scope of its functions in general or the adaptation of lenses or frames for the aid thereof.

Drugs or Medicines

The use of those drugs or medicines which were in 1922 or should be thereafter included in materia medica is prohibited.

Materia medica is defined in the case of *Millsap* vs. *Alderson*, 63 Cal. App. 518 (August, 1923), as:

> the substances employed as remedial agents.

Pursuant to Section 1875 of the Code of Civil Procedure, this court has authority to consult such standard works as the United States Pharmacopoeia, National Formulary, and the booklet which is issued by the American Medical Association between the publications of the first named compilations and which is known as "New and Nonofficial Remedies."

From this it is evident that no drugs or medicines can be used by a chiropractor.

DEFINITION OF CHIROPRACTIC

Because of the expression "any and all" other methods in the treatment of diseases, injuries, etc., which is used in Section 8 of the Medical Practice Act, we contended in oral argument that the practice of medicine covered every field appertaining to the healing arts and included every branch thereof. We directed, for the sake of a simple example, the court's attention to a pie and stated that the field of medicine included the pie in its entirety and that other forms of the healing arts covered segments thereof.

Before the enactment of the Chiropractic Act, persons practicing "chiropractic" without being licensed to practice medicine and surgery or without licensure as drugless physicians were guilty of the offense of practicing medicine without a license. (*People* vs. *Vermillion*, 30 Cal. App. 417; *People* vs. *Oakley*, 30 Cal. App. 519.)

After the enactment of the Chiropractic Act, a person practicing "chiropractic" without being licensed to practice medicine and surgery, drugless practice or chiropractic was guilty of the offense of practicing medicine without a license. Of a consequence, chiropractic must still be included in the field of medicine.

That our contention is sound has been determined by the District Court of Appeal of this State in *People* vs. *Mills*, 74 Cal. App. 353 (September, 1925), in which case a hearing by the Supreme Court was denied. Therein an individual was charged with the practice of medicine without a license. . . .

The first time we find reference to the expression "chiropractic" in the courts of this State is in the case entitled *In re Greenall*, 153 Cal. 767. This case was before our Supreme Court in 1908. . . .

We appreciate that the Supreme Court did not in such case define chiropractic. It did, however, state what the petitioner contended was chiropractic and, historically, such case is important and may be consulted. . . .

The Chiropractic Act prohibits a licentiate thereunder from practicing medicine, surgery, osteopathy, dentistry or optometry and prohibits the use by said licentiate of any drug or medicine. As chiropractic is included in the field of medicine a strict construction of this language would keep a chiropractor from doing anything under the terms of his license.

It is a cardinal rule of statutory construction, however, that laws must be so interpreted as to give effect thereto, if such an interpretation is possible. Accordingly, we contend that the following *dicta* from the case of *Evans* vs. *McGranaghan*, 80 C. A. D. 866, applies:

> As we construe section 7 of the Chiropractic Act it authorizes the licenseholder to practice chiropractic * * * regardless of whether such practice would have been construed as the practice of medicine, surgery, osteopathy, dentistry or optometry prior to the enactment of the Chiropractic Act.

In other words, we believe that the chiropractor can practice chiropractic, a limited segment of the field of medicine, but cannot cross the border line from that segment into the forbidden field. Again, the classical example of the pie and the piece thereof. A chiropractor may go from one side of the cut piece of pie to the other, but he cannot cross over into the remaining major segment.

To avoid an absurd interpretation we are forced to conclude that the prohibitory provisions of Section 7 of the Chiropractic Act do not mean exactly what they say. Of necessity there must be a departure from the literal construction of said section. Were this not so, a licensed chiropractor could do nothing by virtue of his license.

By departing from the literal construction we find that a chiropractor can practice chiropractic in so far as chiropractic is included in any of the prohibited practices, but may not pass from the realm of pure chiropractic into the realm of medicine, surgery, etc. Cases approving this doctrine are: . . .

Indeed, in the case of *People of the State of California, etc.* vs. *Steele*, decided in the Superior Court of this State, in the county of Santa Clara, and reversed only because it was tried on a nuisance theory, the court in its opinion stated: . . .

> Without attempting to unduly prolong a discussion of the essential character of chiropractic theory, it may be stated, generally, that the science or art of chiropractic is found in these general propositions: that in the brain of the human animal is the point of control of an innate intelligence which sends its controlling forces by way of the spinal cord through the spinal column and then through the various nerve trunks emitting from the spinal cord and passing through the intervertebral foramina to nerve branches ramifying to all parts of the body, through the perfect functioning of which, health is maintained, but through interference with the transmission of those innate forces through or over the nerve, disease is produced; that owing to the spinal column being the only segmented structure of bone through which these nerve trunks pass and the possibility of displacement of its segments changing the size and shape of the intervertebral foramina, subluxation occur and there offer interference with the transmission of innate forces directly or indirectly; that all disease is thus traceable to impingements of nerve tissue in the spinal column. Chiropractic claims the knowledge of this all-inclusive cause of disease and the ability to adjust and correct these displacements of the segments of the spinal column, thereby removing interference with the transmission of the innate forces. It claims that such adjustment does not add any material forces to the body, but allows the innate to restore to normal what it would have had, had there been no interference. In this manner, it is claimed, health is restored.
>
> It will thus be observed that the theory, science or art of chiropractic is quite definitely circumscribed in its character, scope and practice. * * *

INTERPRETATION OF OTHER PORTIONS OF SECTION 7

Having disposed of the practices prohibited to a person holding a license to practice chiropractic, we approach the clause

> and, also, to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body.

We note that a semicolon precedes the expression "and" which introduces the portion of the sentence here considered. If the effect of the semicolon is to shut off from the preceding portion of Section 7 the thought there contained, obviously a person with a license to practice chiropractic is granted an extra privilege, the privilege being to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body which do not transgress the field of medicine.

Because, however, the testimony in this case shows that all mechanical and hygienic and sanitary measures "indicated as necessary" in a particular case are included in the medical field, it is our view that this clause must be read in the light of the antecedent and subsequent thoughts. The antecedent thought is that a licentiate may practice chiropractic, and from this we conclude that a licentiate may use necessary *chiropractic mechanical*, and *chiropractic hygienic*, and *chiropractic sanitary* measures incident to the care of the body as long as these measures do not enter the prohibited fields.

It is a settled rule of statutory interpretation that

> qualifying words and phrases, grammatically and legally, where no contrary intention appears, refer solely to the last antecedent. A proviso is construed to apply to the provision or clause immediately preceding. Where the by-laws of a society provided first for an annual meeting for the election of officers, and then for a monthly meeting on a specified day "at half past seven o'clock p. m." It was held that the clause specifying to the hour of the meeting had reference only to the monthly meeting. (Lewis Southerland, Statutory Construction, 2nd ed., Sec. 420.)

But the same work and same section states:

> qualifying words have been applied to several preceding sections where the nature of the provisions and the obvious sense required it. * * *

Therefore, it would seem unimportant what the negative mandate modifies, as chiropractic does not include other than hand adjustment of the vertebra of the back and practically all mechanical, hygienic and sanitary measures are within the realm of the five prohibited fields embraced in or carved out of the field of medicine.

INTERPRETATION OF THE PHRASE "SHALL AUTHORIZE THE HOLDER TO PRACTICE CHIROPRACTIC IN THE STATE OF CALIFORNIA AS TAUGHT IN CHIROPRACTICE SCHOOLS OR COLLEGES"

According to Article IV, Section 1, of the Constitution the Legislature is vested with all legislative power, except in so far as the people reserve to themselves the power to propose laws and amendments to the Constitution and to adopt or reject the same, at the polls, independent of the Legislature.

In *Wallace* vs. *Zinman*, 200 Cal. 585, it was contended that an initiative measure was a constitutional amendment and that as a constitutional amendment it need not conform to the provision of the Constitution requiring every subject contained in the Act to be expressed in its title. It was held that an initiative measure had no greater strength or dignity than a legislative act and had to conform to the Constitution.

If this be the rule as to the initiative measures conforming to that portion of the Constitution requiring the subject of an act to be expressed in its title, it follows that it is likewise the rule in so far as the constitutional requirement prohibiting a delegation of legislative power is concerned.

In the case entitled *In re Peppers*, 189 Cal. 682, it was held that the Legislature had no power to delegate to an administrative board or officer its exclusive power and function of determining what acts or omissions on the part of an individual are unlawful.

In *Knight* vs. *City of Eureka*, 123 Cal. 192, it was held that the Board of Supervisors might not delegate to an attorney power to employ another "if, in his judgment, it becomes necessary."

In *Ex Parte Cox*, 63 Cal. 21, an Act authorizing a commission to make certain quarantine regulations and declare that a violation of them should constitute a misdemeanor was held to be unlawful as a delegation of legislative power.

In *Ex Parte McNulty*, 77 Cal. 164, it was held that the Legislature could not delegate to a board of medical examiners the power of declaring what acts should constitute a misdemeanor.

Petitioner contends throughout his opening brief that a chiropractor can practice any branch of the healing arts which any chiropractic school teaches as "chiropractic." Obviously his contention is based upon the theory that the Initiative Act permits a chiropractic school or college to determine what is chiropractic.

It is evident that if the petitioner is correct in his contention, the Chiropractic Act amended Article III, Section 1, of the State Constitution, and there are now four separate departments of the State government, namely, the executive, judicial, legislative, and chiropractic schools and colleges. Being somewhat old-fashioned, we still contend Article III, Section 1, means what it says, to wit:

> The powers of the government of the State of California shall be divided into three separate departments—the legislative, executive, and judicial; * * *.

Under the cases above cited and under the constitutional section, petitioner's contention must fail, as no law has ever been sustained which permitted the faculty of a school to determine what acts might be performed by a person holding a qualified type of licensure. Surely, it cannot be seriously contended that if a chiropractic school taught its pupils that surgery was chiropractic that a chiropractor might thereafter practice surgery.

Petitioner's contention falls squarely in the category of the case of *Ex parte McNulty, supra*, and if a school can determine what is chiropractic, a person can be punished under Section 15 of the Act for doing an act determined to be chiropractic by the school and not by the proper legislative power.

Of a consequence we conclude that the language "in the State of California as taught in chiropractic schools or colleges" means nothing, for, in the first place, the State of California could not grant a license to practice chiropractic in another state (*Dent* vs. *West Virginia*, 129 U. S. 114), and in the second place, if chiropractic schools could determine what constitutes chiropractic, Article IV, Section 1, of the Constitution would be violated .

THE HISTORY OF CHIROPRACTIC IN THE STATE OF CALIFORNIA AND THE EFFECT THEREOF ON THE INTERPRETATION OF THE CHIROPRACTIC ACT

Before the chiropractic law was adopted in California chiropractors had to have a license either as a physician and surgeon or as a drugless practitioner. (*People* vs. *Chung*, 28 Cal. App. 121; *Ex parte Greenall*, 153 Cal. 767; *People* vs. *La Barre, et al.*, 193 Cal. 388.)

In 1920, a chiropractic initiative measure was on the ballot and was defeated. It provided, among other things (Section 6, subdivision c), that a chiropractor would be authorized to practice obstetrics (Section 11); that they might sign birth certificates and diagnose and use such natural agencies as water, food, heat, and electricity, manual and mechanical means and manipulations as auxiliaries in their practice.

The argument in favor of the Chiropractic Act specifically stated:

> It does not permit chiropractors to practice medicine or surgery.
>
> Chiropractic is not taught in medical schools nor medical textbooks. The medical doctors neither understand nor believe in chiropractic. They are not competent to examine chiropractors.

It is settled that to ascertain the spirit, intention and purpose of a law a court may look into contemporaneous and prior legislation on the same subject and the external and historical facts and conditions which lead to its enactment. (*Grannis* vs. *Superior Court*, 146 Cal. 245.)

In case of uncertainty as to the construction of an initiative act, it is proper to resort in aid of its interpretation to the arguments submitted to the voters at the time it was voted upon. (*Crooks* vs. *People's Finance and Thrift Co.*, 111 Cal. App. Supp. 769.)

Applying these canons of statutory interpretation, it is quite evident that in the year 1920 an attempt was made to have chiropractic include healing measures which are absent from the Act of 1922 as adopted. There is nothing in the Act of 1922 which permits a chiropractor to do obstetrics or to use water, food, heat, and electricity in his practice.

In the year 1922 a chiropractic measure eliminating medical practices was proposed to the people. The argument in favor of the proposed act stated: It

> prohibits the use of drugs, surgery or the practice of obstetrics by chiropractors * * * the teachings and practice of chiropractic are admittedly different from those of medicine.

It would hence appear that chiropractic has a definite meaning and does not include the many matters contended for by the petitioner, McGranaghan.

AS TO MECHANICAL, HYGIENIC AND SANITARY MEASURES

The evidence in the matter at bar shows that there are necessary chiropractic mechanical, chiropractic hygienic and chiropractic sanitary measures. The testimony shows that at one stage in chiropractic a rubber hammer was used upon the vertebra of the spine. While not generally accepted by the profession, it is unquestionably a mechanical measure and as such was used in the year 1922. There is testimony that the chiropractic table is a necessary mechanical measure.

The only evidence in the record as to what is a chiropractic hygienic measure relates to the use of paper towels. These, it appears, are placed upon a chiropractic table and the patient's face placed thereon. The purpose of this is to prevent the patient from coming in contact with such perspiration or disease germs as may have been left by a preceding patient.

There are few sanitary measures which are strictly chiropractic. Indeed, most things used in sanitary measures are included in the realm of *materia medica*. The use of soap and water for cleansing the body of a patient is distinctly a sanitary measure and is not prohibited by Section 7.

As early as the year 1926, it was conceded by the Attorney-General that a chiropractor might use an x-ray for the purpose of analyzing or diagnosing the physical condition of a patient. Our opinion rendered at that time reads as follows:

> January 26, 1926.
>
> State Board of Chiropractic Examiners,
> Forum Building,
> Sacramento, Calif.
> Attention: Dr. James Compton, Secy.
>
> Gentlemen:
>
> I have before me your communication under date of January 2nd, 1926, which is as follows:
>
> "Section seven of the Chiropractic Act states, in substance, that a licentiate of the State Board of Chiropractic Examiners is authorized to practice Chiropractic in the State of California, as taught in chiropractic schools or colleges, and also, use all necessary mechanical and hygienic and sanitary measures incident to the care of the body.
>
> "In order that this Board may have a definite understanding of what is meant by the use of 'all necessary mechanical and hygienic and sanitary measures,' in connection with the practice of chiropractic, we would appreciate an official opinion from you relative to the meaning of that portion of section seven to which we have referred.
>
> "We particularly desire to know if a licentiate of this Board may legally use, or hold himself out as using, electrotherapy, hydrotherapy, electronic medicine, etc., as therapeutical agencies in the treatment of disease; or, may he use mechanical agencies only for the purpose of analyzing or diagnosing disease, such as x-ray, stethoscope, neurocalometer, etc."
>
> It would appear that the language of the act authorizing the use of chiropractors of "all necessary mechanical and hygienic and sanitary measures" incident to the care of the body in itself answers the question which you submit, for clearly, sciences, systems or methods for the treatment of disease, such as electrotherapy, hydrotherapy and other systems of treatment, do not come within the scope of chiropractic practice.
>
> It is undoubtedly true that a duly qualified and licensed practitioner of chiropractic may make use of an x-ray machine for the purpose of analyzing or diagnosing the physical condition of a patient but would not be authorized under the act to make use of that machine for the treatment of disease or illness, for that would constitute the practice of medicine which is not included within the science of chiropractic.
>
> The words of the statute in section 7, permitting the use of all necessary mechanical and hygienic and sanitary measures incident in the care of the body, must be construed in a sense restricted to chiropractic. In construing statutes wherein we have words of general sense in conjunction with words of a specific sense, the words of the greater general meaning are restricted by the words of more specific meaning. Take, for instance, the x-ray above referred to. The use of the x-ray therapeutically is the practice of medicine. The use of the x-ray in the chiropractic sense would restrict its use to purposes of analysis or diagnosis, to locate the position of the vertebrae and the relation of one vertebra to another.
>
> This would seem to illustrate the difference between the use of the x-ray as a medical agent and its use as a chiropractic agent.
>
> As to sanitary measures, there would no doubt be a greater range in the use of sanitation as contemplated in the practice of chiropractic than there would be in the use of mechanical measures. Sanitation is inherent in all the healing arts, but the sanitary measures to be used by chiropractors must be confined to those things which are strictly sanitary as distinguished from therapeutic measures used in medicine. Therefore, generally speaking all mechanical, hygienic and sanitary measures used by chiropractic licensees must be construed strictly with the chiropractic idea in mind.
>
> I am therefore of the opinion, to directly answer your query, that a chiropractic practitioner is not, as such, authorized to employ electrotherapy, hydrotherapy, electronic medicine, etc., as therapeutic agencies in the treatment of disease but may with propriety use mechanical agencies such as the x-ray, stethoscope, neurocalometer, etc., purely for the purpose of analyzing or diagnosing for chiropractic treatment.
>
> Very truly yours,
> U. S. Webb, Attorney General,
> By Leon French, Deputy.

CONCLUSION

We have set forth herein what matters constitute chiropractic and ask that this honorable court declare that the petitioner has the right to practice those things only which are within the philosophy of chiropractic and that the use of all therapeutic and electrical appliances, as well as the prescribing of diets, are prohibited by the terms of Section 7 of the Chiropractic Act.

U. S. Webb,
Attorney-General of the State of California.
Leon French,
Deputy Attorney-General of the State of California.
Lionel Browne,
Deputy Attorney-General of the State of California.
Attorneys for Intervenor, The People of the State of California.

COURT DECISION ON CHIROPRACTIC CASE

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF SAN FRANCISCO*

Honorable John J. Van Nostrand presiding.

No. 257362

In the Matter of the Application of M. James McGranaghan, for Declaratory Relief, Plaintiff, vs. Dora Berger, Intervenor and Defendant, vs. Roy B. Labachotte, Intervenor and Defendant, vs. The People of the State of California, Intervenor.

MEMORANDUM OF OPINION

This is an action in declaratory relief instituted by M. James McGranaghan seeking an interpretation of Section 7 of the Chiropractic Act. Roy B. Labachotte, Dora Berger and the People of the State of California have filed separately complaints in intervention also asking for an interpretation of the same section, which reads as follows:

> One form of certificate shall be issued by the board of chiropractic examiners, which said certificate shall be designed "License to practice chiropractic," which license shall authorize the holder thereof to practice chiropractic

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* This is the opinion handed down by Judge John J. Van Nostrand. For Brief on this case, see page 414. Editorial comment is made on page 380.

in the State of California as taught in chiropractic schools or colleges; and, also, to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body, but shall not authorize the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in materia medica.

Much testimony has been introduced and the matter ably and fully argued and briefed by respective counsel.

The District Court of Appeal, in the case of *Evans* vs. *McGranaghan*, said in part:

> It contains no definition of "Chiropractic as taught in chiropractic schools or colleges. . . ."

Also,

> The intent of the statute is clear upon its face: that the license shall authorize the holder to practice chiropractic as taught in chiropractic schools or colleges. But the court has no way of determining the scope of chiropractic as taught in such schools and colleges in the absence of evidence on that subject, and hence a resort to such evidence would be proper.

After a careful analysis of the testimony, the arguments and authorities cited, I am of the opinion that "chiropractic as taught in chiropractic schools or colleges" means the practice of chiropractic as such, irrespective of the subjects embraced in the curriculum, such as minor surgery, obstetrics, replacing shoulder, hip, rib and foot subluxations and dislocations, etc., which I am of the opinion are embraced in the field of medicine or surgery, and not a part of chiropractic. As counsel for one of the intervenors aptly states: "It may be that a student in dentistry would embrace in his curriculum the study of anatomy, but this would not justify him in practicing either surgery or medicine."

I am further of the opinion that under Section 7 of the Act a chiropractor would have no right to do any of the enumerated things in Sections 8 and 17 of the Medical Practice Act, nor the right to treat the eye, ear, nose, and throat; although I am not of the opinion that a manipulation of the vertebrae of the spine would be included in the word "surgery" as contemplated in the Medical Act, nor can I see under the provisions of this Act where a chiropractor has the legal right as such to practice osteopathy as defined in the cases of *Harlan* vs. *Alderson*, 55 Cal. App. 263, and *In re Rust*, 181 Cal. 73. I am, likewise, of the opinion that under Section 11 of the Dental Laws of the State of California, a chiropractor has no legal right to perform an operation on the teeth of a patient, or "treat diseases or lesions of the human teeth, alveolar process, gums or jaws or correct malimposed positions thereof, or construct, alter, repair or sell any bridge, crown, denture or other prosthetic appliance or orthodontic appliance."

Chapter 598 of the Statutes of 1913 definitely defines "optometry," and I cannot see how it in any manner or form can be included in the term "chiropractic" either in the treatment of the eye or in the use of either lenses, or frames, permanently or temporarily.

I am not in accord with the position assumed by the plaintiff herein as to the unconstitutionality of the words "materia medica," for they have a well-defined and recognized meaning, and have been frequently used by the courts of this state, and consequently I hold that the chiropractor has no right to administer or prescribe drugs or medicines.

I am further of the opinion that the words "all necessary mechanical, and hygienic and sanitary measures" would include the use of the x-ray for the purpose of analysis or diagnosis of the physical condition of the patient, but not for the purpose of treating disease or illness. The same is true as to the stethoscope, neurocalometer, and kindred modalities which might properly be used for diagnostic purposes.

Such appliances or agencies as the chiropractic table, chiropractic hammer, and towels and other instrumentalities as are purely sanitary do not violate the statute, but the use of the various therapeutic agencies such as electrotherapy, hydrotherapy, colonic therapy, etc., are embraced in the practice of medicine and, therefore, forbidden to chiropractors.

John J. Van Nostrand,
Judge of the Superior Court.

Dated September 28, 1936.

THE LURE OF MEDICAL HISTORY†

THE HUNTERS IN EMBRYOLOGY*

By A. W. Meyer, M.D.
Stanford University

I**

The famous Scotchmen, John and William Hunter, have always occupied a prominent place in the history of medicine, and deservedly so. William also has usually been given a place in the history of embryology almost wholly denied John. Yet Duncan,[1] who championed William in his well-known volume, declared in the Harveian address of 1876 that William "left behind him scarcely anything to perpetuate his memory, except the work on the Gravid Uterus, which, though undoubtedly of great merit, has had no very extensive influence on the progress of knowledge, and cannot in any way be compared with what has been effected by his brother." (p. 1077.)‡ However, Rádl,[2] in his *Geschichte der biologischen Theorien,* barely mentioned John, merely listing him among some other comparative anatomists, and Bilikiewicz[3] only mentioned John in a footnote, although he used the name of his brother for a subtitle. Nordenskiöld,[4] however, gave John, instead of William, a place in his History of Biology. He pointed especially to John's treatise on teeth and to his ideas regarding the blood and his comparative anatomical work. Needham,[5] on the other hand, mentioned both William and John in his History of Embryology, referring to the former as an embryologic iconographer, and especially emphasized John's connection with the idea of recapitulation.

It is not surprising that the unexcelled and sumptuous "elephant" folio on the gravid uterus,[6] for the "elaborateness" of which the author felt it necessary to apologize, attracted great attention at the time of its appearance in 1774, and that it has been extolled very often since that day. It will be recalled that this atlas on human pregnancy is composed of thirty-four excellent, large plates, 47 by 64 centimeters, the work of accomplished artists, and of engravers supervised by Robert Strange, who himself executed two of the plates, causing Hunter to say that Strange had thereby "secured a sort of immortality" for the plates. This atlas is characterized quite adequately by Choulant,[7] and also was commented upon with great appreciation by von Siebold[8] in his *Geschichte der Geburtshülfe.*

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†A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

*From the Department of Anatomy, Stanford University.

** This paper will appear in three parts.

‡ This opinion of Duncan's is substantiated by the fact that such an outstanding embryologist as Charles Sedgwick Minot did not refer to the Hunters in his discussion of the Decidua in the Reference Handbook of the Medical Sciences by Buck, 1894.

[1] Duncan, J. Matthews: On the life of William Hunter: The Harveian address, April 13, 1876. Edinburg Medical Journal, 21 (Pt. 2), 1061-1079, 1876.

[2] Rádl, Em.: Geschichte der biologischen Theorien seit dem Ende des siebzehnten Jahrhunderts. I. Teil. Leipzig, 1905.

[3] Bilikiewicz, Tadeusz: Die Embryologie im Zeitalter des Barock und des Rokoko. Leipzig, 1932. (Arbeiten des Instituts für Geschichte der Medizin an der Universität Leipzig, Band 2.)

[4] Nordenskiöld, Eric: The history of biology. Translated from the Swedish by Leonard Bucknall Eyre. New York, 1928.

[5] Needham, Joseph: A history of embryology. Cambridge, 1934.

[6] Hunter, William: Anatomia uteri humani gravida tabulis illustrata (Anatomy of the human gravid uterus exhibited in figures). Birmingham, 1774.

WILLIAM HUNTER'S DISSECTIONS

William, who was famed as an obstetrician, apparently had dissected mammals late in gestation in order to enlarge his knowledge of the subject, and said that he projected the above volume when he

> met with the first favourable opportunity in 1751 of examining, in the human species, what before he had been studying in brutes. A woman died suddenly, when very near the end of pregnancy, the body was procured before any sensible putrefaction had begun, the season of the year was favourable to dissection.

With "the assistance of many friends," he was able to secure twelve more bodies in a similar state, in the preparation of which, for the artists, John played an important part. William expressed his indebtedness to John in the last paragraph of the preface to his treatise on the gravid uterus, for his skill in dissection. The latter's share in the production of it hence received public recognition from the time of the appearance of this treatise, twenty-six years after he joined William, even if not from the very beginning of the undertaking.

In the Gravid Uterus, William said that he expected to publish an additional plate representing "a younger human embryo than he had seen heretofore, and also a tubal pregnancy which he had drawn," and he added that if he "should be prevented from doing this by any unforeseen accident," it would be "in the power of many gentlemen of the profession to do it" for him, because he had "constantly explained his observations on this subject in his public lectures." He apparently never found the leisure for doing these things and his professional friends apparently failed him, for according to Teacher[9] (1900), "He never carried out this scheme, and there is no detailed description of either of these cases, nor sketches of the embryo in the museum. The embryo and placenta from the extra-uterine case are the original of the illustration in Quain's *Anatomy* 'after Allen Thomson,' tenth edition, vol. i, pt. i, p. 104, fig. 124. Professor Thomson sketched it for the seventh edition, 1867, in which it appeared as Fig. 603." (pp. lix-lx.) According to this, then, the drawing did not appear in the posthumous volume on the uterus which appeared in 1794.

THE NAME, DECIDUA

According to Teacher (p. lii), William invented the name decidua for the spongy chorion, and believed (p. liv) in 1775 that the placenta " 'is partly made up of an excrescence from the uterus itself . . . the internal membrane of the uterus, which I have named decidua, constitutes the exterior part of the secundines, or after-birth . . .' " Moreover, from the text accompanying Plate 34 of the Gravid Uterus, which appeared in 1774, it is evident that William regarded the decidua itself as a conception, which also indicates that he regarded it as a growth. He had a correct idea of the gross relations of the chorionic vesicle to the decidua, and the decidua externa (vera) and reflexa long were known as the Hunterian membranes. However, as far as I have been able to learn, he did not use the term serotina, as von Siebold[8] (1902) said, but spoke of a lamella externa instead. Webster[10] (1901) said that John named the decidua serotina and plainly implied that it also was he who named the reflexa, while Williams[11] (1903), on the other hand, wrote: "The terms reflexa and serotina date from the time of William Hunter, who gave excellent drawings of the decidual membrane in his atlas. Unfortunately, the author died just after its appearance and before the completion of the explanatory text, which was prepared by John Hunter and Matthew Baillie . . ." (p. 106), and he attributed John's idea of the formation of the decidua to William. This statement was partly corrected in a later edition[12] (1931), but not without the introduction of other errors, as the following quotation shows:

> The terms *reflexa* and *serotina* date from the time of William Hunter, who gave excellent drawings of the decidual membrane in his atlas. Unfortunately, the explanatory text was prepared by John Hunter and Matthew Baillie, who considered that the decidua represented a fibrinous exudate from the lining membrane of the uterus, which not only formed a complete cast of its cavity, but also covered the tubal openings. They supposed, therefore, that when the ovum reached the uterine end of the tube its further passage was opposed by the decidua vera, which it was obliged to push before it as it entered the uterus, whence the term *reflexa*; consequently, after the latter had been pushed forward, a new exudate was developed behind the ovum, to which the term *serotina* (late) was applied (Figs. 140 and 141). (pp. 137-138.)

The figures referred to are "Diagrams Illustrating Hunterian Theory of Formation of Decidua Reflexa," after the manner of Carpenter[13] (1845), page 601.

It is perplexing that an anonymous auditor[14] of William Hunter's lectures stated (p. 85) that William said he first called the decidua "Caduca,"

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[7] Choulant, Ludwig: Geschichte und Bibliographie der anatomischen Abbildung nach ihrer Beziehung auf anatomische Wissenschaft und bildende Kunst. Leipzig, 1852.

[8] Von Siebold, Ed. Casp. Jac.: Versuch einer Geschichte der Geburtschülfe. Zweite Auflage. Zweiter Band. Tübingen, 1902.

[9] Teacher, John H.: The anatomical and pathological preparations of Dr. William Hunter. Introduction. Glasgow, 1900.

[10] Webster, J. Clarence: Human placentation. Chicago, 1901.

[11] Williams, J. Whitridge: Obstetrics. New York and London, 1903.

[12] ——: Same. Sixth enlarged and revised edition. New York and London, 1931.

[13] Carpenter, William B.: Principles of human physiology. Second American, from the last London edition. With notes and additions by Meredith Clymer. Philadelphia, 1845.

[14] Anonymous: A treatise on midwifery, as given by the late Dr. William Hunter in his lectures; with a description and representation of the uterus and its contents, in the different stages of pregnancy. Also the treatment of women in time of labour, etc. (undated MS. notes occupying pp. 71-181 of volume with cover title, "Ray on Teeth. Hunter. Gravid Uterus.").

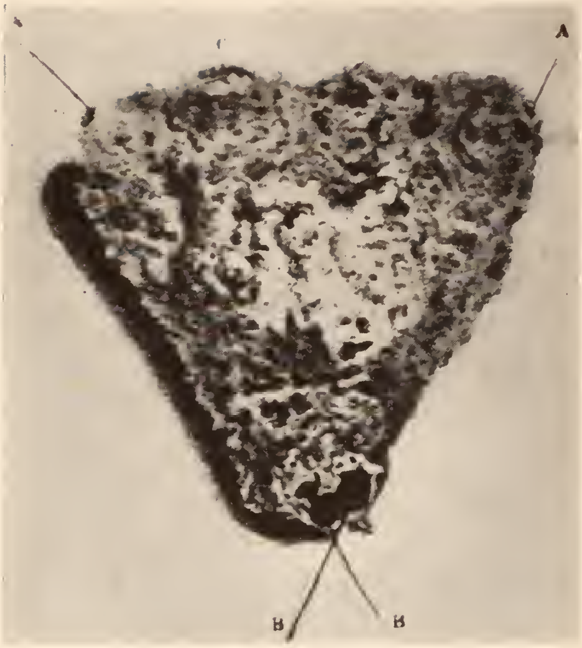

Fig. 1.—Figure 5 of Plate 34, after the Atlas of 1774.

but changed it to decidua when he found that it was temporary. According to this auditor (p. 99), William also declared in his lectures that

> The decidua in the early months lines the uterus loosely with it, [.] at [At] the edges of the placenta. [,] It [it] divides into 2 strata, one of these runs under the placenta, between it & the uterus, & the other is reflected over the membranes. The last is called the decidua reflexa.

It should be noted that this statement is in complete accord with that written by William and contained in the explanatory text accompanying the tables of the Gravid Uterus. A good statement regarding this matter is found in Fasbender,[15] who, however, attributed John's idea of the formation of the decidua to William, perhaps because as Duncan[16] (1868) said:

> In 1780, . . . John Hunter inaugurated the errors in regard to the decidua which have been finally overthrown only in our own time and which still maintain a lingering existence in obstetric literature. (p. 230.)

Fasbender called attention to the fact that Vesalius and Fabricius had represented the decidua, and that this was done also by Noortwyk, who thought that it formed part of the chorion (substantia fungiosa chorii), an opinion held even by Baudelocque (1746-1810), according to Meckel (I, p. 306, quoted by and from Fasbender). Meckel said that Baudelocque rejected the idea of certain anatomists who regarded the decidua as a separate membrane.

In the legend to Figure 5, Plate 34, which is a good representation of a decidual cast, William spoke of AA as representing

> A bristle passed through the cavity of the conception, through a hole at each of the upper angles, which was supposed to be the termination of the fallopian tube. BB. The same bristles coming out through a large hole at the lower angle, supposed to be opposite to the cervix uteri. C. A small hydatide, supposed projecting through the surface of the decidua, which had slender branching filaments shooting from the surface, supposed to be the chorion."

As indicated by the drawing, the hydatid mentioned by William no doubt was a chorionic vesicle, as he thought, and apparently was devoid of an embryo and probably also of an amnion and a yolk sac. The "slender branching filaments shooting from the surface" manifestly were "magma reticule," often so abundant in conceptuses retained after their death.

(To be continued)

Conversational Gems of Dr. J. P. Widney*

Founder of the Los Angeles County Medical Association: At Age of Ninety-Five Still Active in Literary and Church Work

I learned early in life to have my umbrella handy for a rainy day.

You never reform a man by throwing stones at him.

The jail is the product of civilization—the savage settles it with a club.

There is something wrong with the religion that turns out intolerance as its fruit.

The world today is mentally epileptic.

The world likes enthusiasm. Confidence in yourself is half the battle.

Never separate the old and the young. They need each other.

Incompetent to lead—unwilling to follow.

I do not need to interfere with every dog fight in the street.

The Lord said: "I will curse the ground for your sake." You will then no longer lie in the hammock, but will be out cutting down the weeds and thistles.

Rome tried two generals to an army—it did not work

It's the mind that keeps the body alive.

The mass of the people are where they are because they are what they are.

A political party is like a business house—it must have something to sell.

The mole never sees the sun.

The porcupine wondered why no one would be neighborly with him.

Above all things, do not make medicine a part of your diet.

As I could not get new eyes, I bought a new Bible.

Don't waste your life dying before your time has come

A thing that is to be understood is apt to be misunderstood.

Heaven is where there is a clear conscience.

The whole world is struggling to get something for which it does not pay.

There is a great amount of so-called religious training that does not increase moral fiber.

A kindly, sweet-spirited sinner is of more worth in the uplift of the world than a soured "saint."

The old-fashioned book store, like the old-fashioned drug store, is a thing of the past.

Home is a personality.

No amount of financial juggling can create money.

Borrowing more money has never yet settled a debt.

The ultimate standard of valuation is production.

He was aiming at nothing, and hit it.

Some people have no bread but they have automobiles

In world matters we are apt to mistake the foam for the river.

Spain is not Europe. It is Africa.

The time for poulticing in politics has gone by. It is now time for the lancet.

(To be continued)

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[15] Fasbender, Heinrich: Geschichte der Geburtshülfe. Jena, 1906.

[16] Duncan, J. Matthews: Notes on the history of the mucous membrane of the body of the uterus. William and John Hunter. In Researches in Obstetrics, Chapter 6, pp. 222-242. Edinburgh. 1868.

* Compiled by Rebecca Davis Macartney.

Previous excerpts from the Macartney compilation were printed in the July issue (page 61), August issue (page 171), September issue (page 278), and October issue (page 355).

CLINICAL NOTES AND CASE REPORTS

A MEDIASTINAL TUMOR*

By Jessie M. Bierman, M.D.
San Francisco

HISTORY.—Case 36165: A boy of eight and one-half years had always been delicate. He suffered from eczema during infancy, and following bronchopneumonia at three years he was subject to attacks of asthma. He was sensitive to egg-white and fish. He had many colds, and at the age of five and one-half years again had bronchopneumonia. He was fairly well the following year until November, when his appetite failed; he lost weight and looked pale. He continued at school until December 12, when he was discovered to be running a slight fever and had become very irritable.

He entered the Children's Hospital, January 8, 1935.

Physical Examination.—He was small, poorly nourished and very pale, but did not look acutely sick. The eyes, ears, and nose appeared normal. A few shotty glands could be felt in the anterior triangles of the neck, the axillae, and the inguinal regions. The teeth contained a number of filled cavities. The gums were healthy. The tonsils were small and not injected. The left shoulder was held higher than the right. The veins of the left upper thorax were distended. Movement of the left chest was diminished. Tactile fremitus was absent over the upper part of the chest, anteriorly and posteriorly. There was dullness over the left upper chest anteriorly, from the supraclavicular space downward merging into cardiac dullness. The dullness extended laterally to the midaxillary line in the third interspace, from which it reflected anteriorly to the midclavicular line, leaving a small area of hyperresonance lateral to the cardiac apex in the fourth and fifth interspaces. To the right of the sternum the dullness extended 2½ to 3½ centimeters in the second and fourth interspaces, respectively. Posteriorly, the dullness occupied an area corresponding to that noted anteriorly, with an area of normal resonance in the axillary line. The breath sounds were tubular over the apex of the left lung. Strident, whistling breath sounds were heard below the clavicle.

The cardiac P. M. I. was in the midclavicular line in the fifth interspace. The cardiac borders were obscured by the dullness above described. The heart sounds were distant. A faint systolic murmur was heard at the base. The blood pressure was 102/60.

The abdominal wall was thin and relaxed. The liver dullness extended from the fifth interspace to 2½ centimeters below the costal margin in the nipple line, and was not tender. The spleen extended 5 centimeters below the costal margin. It was elongated, firm, and slightly tender.

The temperature was 99 degrees Fahrenheit; pulse, 88; respiration, 24. The urine showed nothing abnormal.

Blood: Hemoglobin, 54 per cent; red blood cells, 3.8 M; white blood cells, 32,700.

The differential count, done by Dr. H. G. Henderson on a fresh smear stained by the supravital method, showed: Polymorphonuclears, 5; lymphocytes, 90; myelocytes, 2; monocytes, 2; basophils, 1.

Most of the lymphocytes were immature and young forms. There was some variation in the size and shape of the red cells, and an occasional nucleated form.

Platelets, 190,000; coagulation time, five minutes; bleeding time, four minutes; tuberculin, negative; Wassermann, negative.

Diagnosis.—The elevated shoulder, diminished respiratory excursion, absent tactile fremitus and thoracic dullness suggest pleural effusion, but doubt as to the correctness of this diagnosis is indicated by the normal position of the cardiac apex and by the unusual distribution of the dullness even for an encapsulated or interlobar collection of fluid. The peculiar whistling breath sounds suggest compression of a bronchus. The dilated veins over the left chest indicate pressure against the superior vena cava or its branches. A mediastinal tumor would best explain all these findings. This diagnosis was confirmed by the x-ray, in which a large tumor mass was seen to occupy the anterior mediastinum mainly on the left, obscuring the lung field except for a narrow lateral portion.

Of the mediastinal tumors likely to be encountered in childhood, lymphocytoma, lymphosarcoma, dermoid cyst or teratoma, there is strong evidence in favor of lymphocytoma or leukemic infiltration in the enlargement of the spleen and the blood picture. The blood picture shows a large number of immature lymphocytes, which makes the diagnosis of acute lymphatic leukemia likely. That the disease is in the early stage is indicated by the lack of evidence of infiltration of other organs or lymph glands, the normal coagulation and bleeding time, and the relatively good general condition of the patient.

Progress and Treatment.—The temperature ranged between 98 and 101 degrees Fahrenheit for three weeks to January 31, after which it swung to 104 degrees Fahrenheit.

X-ray treatment to the chest was begun January 12 and repeated at five-day intervals. The doses were small (48 to 65 R.). On the day of the second treatment, the tumor mass was slightly smaller to percussion, and according to tracings made with the aid of the fluoroscope. After the fourth treatment the mass was definitely smaller. The blood picture was much the same, except that the lymphocytes had increased to 99 per cent, with many immature forms.

By January 30 the liver and spleen both extended to the level of the umbilicus. The cervical glands were considerably enlarged. The patient was drowsy and he had a profuse nosebleed. The white count was 57,400, the hemoglobin 50 per cent. From this time on there was a succession of severe hemorrhages from the nose, into the right auditory canal and temporal region.

On February 9, petechial hemorrhages appeared over the entire body; the white count was 73,000 with 98 per cent lymphocytes. Two days later it dropped to 3,700, with 100 per cent lymphocytes; and on the day of death, February 14, the white count was 300, hemoglobin 17 per cent.

Every type of supportive treatment, including transfusions, hematinics and hemostatics, were used without affecting in any way the rapid progress of the disease. There is no doubt that the x-ray therapy did decrease the size of the mediastinal tumor, but certainly did not delay the outcome of this invariably fatal disease.

384 Post Street.

PEPTIC ULCER*

By John W. Shuman, M.D.
Los Angeles

HERE is an old, old story; only it happened this year! And it involves a number of the staff of this hospital and a patient who was a "stomach complainer."

The latter was a 46-year-old salesman, who had had more than his share of family and financial troubles prior to a consultation in March, 1935. In late 1934 he had suffered an acute pain in the upper belly, which necessitated opiates and bed rest for several weeks—quite likely an "acute abdomen." Later, an ex-ray study of the stomach found for "ulcer of the stomach." The medical consultant's findings in March were: "A dyspeptic individual who was afraid of dentist, doctors, and life itself; the usual history of 'alcoholism'; a marked tremor; pulse fast; insomnia; periods of

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* From the Department of Pediatrics, Children's Hospital, San Francisco.

* Presented on December 5, 1935, at the Hollywood Hospital Weekly Pathological Conference.

'sour stomach'; vomiting and pain, following eating." The man had heard the erroneous and pernicious teaching that "all stomach cancers begin in ulcer," and was "sold" on the idea that his stomach needed an operation. This notion has added false fears to many others suffered not only by patients, but also by surgeons and internists.

STOMACH ULCERS

Before proceeding with this man, let us reason that most ulcers occur near the outlet of the stomach because of pyloric muscle spasm. The reaction of the sympathetic nerves due to overstimulation by thyroxin, which got its whip-up from disturbing ideations, focal infection or the like, causes pylorospasm. This shuts off the blood supply to the mucosa, and good old hyperchlorhydria does the denuding, leaving an open sore. Spasms of the glottis, esophagus, ileocecal junction, colon and rectum are no rarities. If the ulcer is small and the spasms discontinue, healing is the result. Any pathologist can show us many healed ulcers discovered at autopsy which were not suspected during life. The ulcer that heals spontaneously is uninteresting. The one which gnaws through the wall of the stomach or duodenum, the bleeder and the incurable ulcer, are the ones which toss us for loops. Since the advent of the x-ray, aided by the opaque meal, more ulcers of the stomach are diagnosed . . . some which cannot be found even at operation or autopsy!

With reference to diagnosis, and periodicity of attacks:

1. "Hunger pains" (coming two to three hours after eating).

2. "Food ease" (often "soda ease," lasting for two or three hours).

3. "Hypersecretion" (the spitting or vomiting of sour material).

4. "Hyperacidity" (sour stomach, often called "heart burn." . . . These make a quartet that sing, "Suspect a peptic ulcer!" We should then check stools for blood; and if a gastro-intestinal x-ray series can be afforded, it should be made. The fluoroscope should be generously used in viewing the stomach during its filling and emptying, for ulcer defects.

The duodenal-ulcer patient is usually well nourished, because food is taken often and copiously enough to secure the "food ease." The stomach-ulcer patient is the dyspeptic, thin type—afraid to eat because of food distress, especially if the ulcer has perforated and is adherent to a neighboring viscus. The ulcer which bleeds will show, on a meat-free diet, occult blood in the stool with benzidin. Let us remember, however, the therapeutic test for our poorer patients, namely, the feeding of a bland nourishing diet, *e. g.*, milk and cream every three hours (even at 1 a. m. by the alarm clock) with regular meals. If the pain disappears, diagnose "ulcer" and continue the patient on the anti-ulcer diet. This diet needs no man's name. This may be supplemented with "Arm & Hammer" brand soda, since it costs less. Sure, bismuth subnitrate and belladonna may be added for mystery's sake: anything for comfort, but keep the patient comfortable, mentally as well as physically. Three weeks in bed with a continuous dripping of milk through a small tube into the stomach made a physician's chronic ulcer comfortable last month. He had gotten fatigued carrying his milk bottle under one arm and alkaline powders under the other!

PATIENT'S STORY

To return to our patient's story: the consultant agreed with the diagnosis of "peptice ulcer." Where it was located he did not know, nor was he certain of its character. He advised:

First: A more careful medical regimen, and no operation for some time.

Second: Lugol's solution, drops five to ten, three times a day, because of moderate hyperthyroidism. The patient tolerated ten drops three times a day, which proves, at any rate, that he was not a hypothyroid.

Third: A clearance of the dental and peridental focal infection, which was severe. This was not done. The man had a gastro-enterostomy in this hospital in August. An ulcer was found, which was plastered against the pancreas; no attempt, of course, was made to loosen good old nature's patch, which she put there last year when the perforation occurred.

SURGICAL INDICATIONS

Here are the indications for surgical management of peptic ulcer:

1. Perforation. Immediate operation to help nature close the hole.

2. Obstruction at the pylorus (not by spasm). A gastro-enterostomy is a blessing.

3. Pain. The ulcer which does not yield to proper medical management begs for surgery.

4. Hemorrhages. Repeated.

Pain and hemorrhages are often debated. Let us not debate them, or we lose cast with one another. This patient recovered from his operation and is getting confidence in his gastro-enterostomy; but—

POSTLUDE

Last Sunday morning at one o'clock the patient telephoned: "I have $25 for the doctor who will relieve the neuralgia in my left face. I've taken all the pain killers in the house!" The next day the upper left wisdom tooth was found to be the cause. It was extracted and the neuralgia cured! He stated that he recently had had neuralgia in his low-back and neck. Here are the films of the teeth. They were made in this hospital and interpreted "no pathology." That wisdom tooth is not on there because the patient gagged when the films were made! Then take a closer look and one sees that the right lower second molar is dead and abscessed. Here it is as well as two others, which were practically lifted with the fingers.

Thank God for local pain! The man is having his mouth put in a healthy condition—truly a little late, but better than never.

3780 Wilshire Boulevard.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

HYPERINSULINISM-HYPOGLYCEMIA

I. ETIOLOGY

H. CLARE SHEPARDSON, M.D. (384 Post Street, San Francisco).—The proper classification of diseases of the ductless glands has depended upon the recognition of states of over- and underfunction. Occasionally the characteristic syndrome resulting from a disturbed activity of one of the members of the hormonopoietic system has been described prior to its experimental reproduction. For example, gigantism was long suspected as being due to an exaggerated activity of the anterior hypophysis before Evans produced it in rats by injections of an extract of that gland containing the growth-stimulating hormone. In many instances, however, the clinical recognition of such a syndrome has been delayed until such time as the experimental investigator has obtained an active extract. Thus, the etiology of osteitis fibrosa cystica (von Recklinghausen's disease) was not suspected until Collip had secured an active extract of the parathyroid glands. And, although the relationship of diabetes mellitus to pathologic alterations in the islands of Langerhans was postulated by Opie many years before the insulary hormone was isolated, its exact status as a hypofunctional state of the internally secreting portion of the pancreas depended on the relief of diabetes by supplementary therapy with insulin. And it was inevitable that the opportunity to test this hormone clinically and experimentally would ultimately shed light on the effects of overdosage and lead to the recognition of the clinical state of hyperinsulinism.

The similarity in the symptomatology resulting from the hypoglycemia caused by insulin overdosage to the syndrome presented by certain individuals led Harris, in 1923, to investigate the glucose content of the blood stream at various hours during the day in a group of asthenic patients. Two cases with abnormally low blood sugar were described, and an overactivity in function of the pancreatic islets was advanced in explanation. Harris reasoned that it is possible, in view of the fact that the islet tissue of the pancreas is an hormonopoietic organ, not only to have an insufficient secretion (resulting in diabetes mellitus), but an excessive or altered secretion which would produce the symptoms described.

Yet spontaneous hyperinsulinism is to be distinguished from spontaneous hypoglycemia. The latter is merely a descriptive term indicating the lowering of the blood sugar, a condition which may be induced by a variety of causes. Glucose is one of the principal sources of cellular nutrition, and elaborate hormonic and nervous regulation is provided to maintain a fairly stable concentration of this substance in the blood. Not only are several of the glands of secretion engaged in this regulation, but, in addition, a nervous control is maintained, either directly through the liver, or indirectly by way of the pancreas and suprarenal glands.[1]

The various causes of spontaneous hypoglycemia have been summarized by Barnes and Richmond,[2] as follows:

1. Excess of insulin as a result of therapeutic injections of commercial insulin, of tumors and hyperplasia of the pancreas or of functional hyperinsulinism.

2. Lack of opposing secretions resulting from diseases of the suprarenal glands, the hypophysis and possibly of the thyroid gland.

3. Lack of glycogen. This deficiency may result from destruction of the glycogen reservoirs produced by disease of the liver or by wasting of 3
the muscles, or by starvation.

4. Interference with the regulating center, caused by disease affecting the pons, or from overactivity 2
of the vagus nerves.

The chief source of the blood sugar is the store of glycogen in the liver, although when food is being absorbed from the intestine it can be assumed that the sugar content of the blood is augmented from that source directly. Consequently, the actual destruction of a large amount of hepatic tissue will so hinder the formation of glycogen that a glycopenia will ensue. As early as 1874 Brock and Hoffman found that the sugar disappeared from the blood within an hour after ligation of the blood vessels going to and from the liver. Also Mann demonstrated a marked drop in the blood sugar of dogs five hours after hepatectomy. Rabinowitch, in 1929, referred to the marked hypoglycemia of a patient with almost complete suppression of hepatic function resulting from idiopathic acute yellow atrophy of the liver, and Parnos and Wagner reported the case of a girl with a tumor of the liver in whom no blood sugar was demonstrable. Nadler and Wolfer cited a patient in whom, although the usual signs of hepatic insufficiency were lacking, some 70 to 80 per cent of the substance of the liver was replaced by neoplastic tissue, and the remaining hepatic cells were deficient in glycogen; a condition which resulted in failure of the sugar mobilizing function of the liver with consequent hypoglycemia.[3]

Furthermore, an entirely different mechanism, which, however, gives an identical end-result, may be responsible for a loss of glycogen reserve and the consequent production of hypoglycemia. Various workers have demonstrated that the degree of hyperglycemia which develops following the injection of epinephrin is more or less proportional to the amount of glycogen in the liver (Ritzman, Pollock, Bang). A prolonged and continuous overactivity of the adrenals might so deplete the glycogen stores of the liver as to bring about a complete exhaustion of the chief source of the blood sugar. Anderson cites such an instance in which the patient died of hypoglycemic convulsions resulting from an excessive stimulation of gluconeogenesis in the liver by a carcinoma of the adrenals. On the contrary, it is conceivable that gluconeogenesis is maintained at a constant rate in the normal individual by the well-balanced activity of the adrenal glands. If such is the case, any diminution in this secretion would tend to inhibit the formation of glucose from glycogen in the liver. Thus, in Addison's disease hypoglycemia is almost a constant finding. Apparently, then, hypofunction, as well as prolonged hyperactivity of the adrenal glands, can bring about a continuous glycopenia which, if sufficiently severe, will result in the production of the definite group of symptoms clinically associated with marked reduction in the blood-sugar level.

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[1] Wilder, Russell M.: Hyperinsulinism, Internat. Clin., 2:1-19, 1933.

[2] Barnes, J. A., and Richmond, E. L.: Hyperinsulinism, New England J. Med., 213:225-230, 1935.

[3] Shepardson, H. C.: Glycopenia—The Efficacy of High Fat Diets in the Treatment of Chronic Hypoglycemia, Endocrinology, 16:182-192, 1930.

Obviously, any interference, either organic or functional, with the production of glycogen, the storage of glycogen or gluconeogenesis occurring in the liver can result in the production of a hypoglycemia. It may be mentioned, also, apropos of hepatic insufficiency, that substances which have an injurious effect on the liver—for example, hydrazin, chloroform, phosphorus, arsenic—will cause hypoglycemia.

Alteration in function of at least one other member of the endocrine system not infrequently brings about a change in the usual level of the blood sugar. The work of Houssay, Evans, and others, seems to indicate that only in the presence of a properly functioning adenohypophysis can normal carbohydrate metabolism proceed; clinically, diabetes mellitus is not uncommonly associated with acromegaly, a disease resulting from an excessive activity of the acidophilic cells of the anterior portion of the pituitary gland. Contrariwise, patients classified as having a pituitary deficiency are occasionally seen in whom the glucose tolerance curve is extremely flat, indicating what, for the time being, must be considered a *relative* increase (in contrast to an actual excessive secretion) in the amount of circulating insulin.

Finally, hypoglycemia has been demonstrated in starvation, severe and strenuous exercise, progressive muscular atrophy, and in status thymicolymphaticus.

Probably, however, the vast majority of instances of spontaneous hypoglycemia result from an increased production of insulin, caused by either an organic or a functional overactivity of the islets of Langerhans. It must be admitted that the morbific factors in this excessive activity may be either neurogenic or the result of definite anatomic changes in the pancreas itself. And, from the few papers concerned with the intensive study of these cases, it likewise seems apparent that there is no striking difference between those cases with an adenoma or other pathologic alteration and those with no demonstrable pancreatic lesion.

However, like other ductless glands, tumors of the islet cells—adenoma and the like—might be expected to give rise to a syndrome, which, in some respects at least, should be the reverse of that produced by decreased activity, namely, diabetes mellitus. Hypoinsulinism and hyperinsulinism are, in fact, clinical antitheses; the latter is of as serious significance as the former, and the practitioner of today must be as familiar with the one as he is with the other.

Many reports of tumors of the islet cells producing the clinical picture of hyperinsulinism have appeared since Wilder and his associates published the first case in which was correlated clinical data, chemical studies, and pathologic examination. Space forbids any attempt to review the somewhat voluminous literature which has accumulated on this subject. Suffice it to say the symptoms are uniformly quite severe, although fortunately in many cases prompt diagnosis has resulted in surgical intervention with complete relief of the condition.

Although in some cases multiple adenomas have been present (for example, the cases of Frank, of Smith and Seibel, one studied by Wilder), in most instances the symptoms have been produced by a single small adenoma; and it is interesting that in the large majority of cases appearing in the literature the pancreatic lesion has been benign. Furthermore, in spite of the fact that the pathologist encounters hypertrophy of the islands of Langerhans with much greater frequency than tumors, symptomatology resulting from hypoglycemia has been associated with but relatively few cases of hypertrophy of the islet cells (Phillips, John, Mosenthal, Gray). However, of these cases of proved hypertrophy resulting in the clinical syndrome of glycopenia the case of Gray and Feemster is especially interesting and of great practical importance in considering the problems presented by the complication of diabetes with pregnancy. An infant born of an inadequately treated diabetic mother died on the fourth day with symptoms of hypoglycemia. It was proposed, following the finding of a marked hypertrophy of the island cells at necropsy, that this insular overgrowth occurred in response to the demand of maternal tissues for insulin, and that after delivery the supply of insulin in the child was excessive.

Finally, it is now well established that hyperinsulinism may exist without any demonstrable anatomic alteration of the pancreas; a phenomenon not surprising, since the opposite condition, diabetes mellitus, may likewise occur without visible change in the islands of Langerhans. In several reported cases clinically indistinguishable from those in which there are island tumors, no grossly nor histologically resognizable changes have been found in the pancreas.

In conclusion, then, it is apparent that hyperinsulinism results from disturbances in function of the hormonopoietic portion of the pancreas resulting from either islet tumors, insulary hypertrophy or neurogenic acceleration in the secretory activity of the islet cells. On the other hand, hypoglycemia may result not only from an excessive secretion of insulin by the pancreas, but from disturbance in the glycogen forming, as well as the gluconeogenic function of the liver, from abnormal activity of certain of the ductless glands, especially the adrenals and the anterior lobe of the hypophysis, and from certain wasting diseases. Clinically, the symptomatology resulting from these various morbific factors may be indistinguishable from those produced by the parenteral administration of an excessive amount of insulin.

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II. SYMPTOMS

Eugene Ziskind, M.D. (2007 Wilshire Boulevard, Los Angeles).—The most accurate clinical knowledge of hypoglycemia was obtained after the discovery of insulin. Symptoms of insulin overdosage present a fairly typical picture, which for the greater part is characteristic for hypoglycemia, irrespective of its cause. In hypoglycemia due to pancreatic adenomas, the diagnosis of involvement of this organ is made by the exclusion of hepatic, pituitary, adrenal, thyroid and other endocrine symptoms and, finally, by laparotomy, since there are no specific pancreatic manifestations. The symptoms vary with the degree of hypoglycemia, as well as with the rapidity with which the blood sugar falls. There is no absolute blood-sugar level at which certain symptoms invariably occur. Occasionally severe symptoms appear with a relatively high blood sugar, and mild symptoms or none at all with a very low blood sugar, though on the whole the severity of the symptoms is a fair index of the blood-sugar level.

Early, mild symptoms include a sense of impending danger or uneasiness, hunger, restless-
18 ness, numbness, coldness, headache, drowsiness, apathy, weakness, tremulousness, and perspiration. Objectively, at this stage one usually finds tachy-
3 cardia, pallor, tremor, perspiration, and increased pulse pressure. Dilatation of the pupils may also be present. The tachycardia and increased pulse pressure reflect the greater cardiac output, compensating for the deficient supply of carbohydrate energy to the brain. Since the highest cerebral functions are affected first by deficient brain nutrition, it is not surprising that the incipient symptoms may appear in this sphere. Among the subtle, but early signs of hypoglycemia, is impairment of memory. In fact, in objective tests on three patients with hyperinsulinism, the first abnormality noted was a reduction in the auditory memory span. In a patient under observation at the present time, when the blood sugar was 68 milligrams per cent, his memory span was five digits; whereas, one-half hour after eating, his "span" was nine digits. Frequently, a very early indication will be a certain good-natured, euphoric or silly attitude, in which all remarks are punctuated with smiles or laughter. Or there may be an initial apathy with lack of spontaneous activity and speech, bland facial expression, and a poverty of ideas.

A whole gamut of nervous symptoms, including any focal neurologic finding, may subsequently appear. These may be present as transitory phenomena or may last for longer periods, in exceptional instances, up to several days. Paralysis may vary from a mild form of paresis to complete loss of movement, and may be in the nature of cranial nerve palsy, monoplegia, or even hemiplegia. Involuntary movements are relatively frequent, and very marked restlessness and wild tossing about are fairly common. There may be paresthesias, sensory loss, and aphasia. The mental state is frequently disturbed, findings varying from a mild confusion to marked acute manifestations such as mania, delusions, and hallucinations. There may be involuntary laughing, crying, or singing. Reflex changes, chiefly in the nature of increased deep reflexes, have been noted, and a positive Babinski toe response is not uncommon. The objective signs correspond to the symptoms mentioned, and an aggravation of the systemic abnormalities noted in the earlier manifestations. The temperature frequently falls and the drop may be quite marked. I have seen a very pronounced fall in temperature (down to 94 degrees) after injections of insulin. This symptom has considerable diagnostic significance and is not adequately stressed in clinical descriptions of this subject. On the other hand, low-grade fever has at times been recorded with hyperinsulinism.

Further progress of the hypoglycemia as the blood-sugar falls results in convulsions, coma, and finally death. It is of interest to note that convulsions following insulin overdosage may not be due to the low blood sugar. Hrubetz [1] reported that the injection of insulin in doses just sufficient to reduce the blood sugar to zero does not result in seizures. The dose required in rats was one-half to three-fourths units of insulin per kilogram of body weight. With larger dosage, so-called "shock" dosage, she did produce seizures. With one unit of insulin per kilogram of body weight, convulsions were obtained in 2 per cent of the animals tested; with four units convulsions occurred in 90 per cent. The author attributed the convulsions to an extrahypoglycemic factor. This work is emphasized because clinicians often ascribe the convulsions of epileptics to hypoglycemia when the fasting blood sugar is moderately reduced below 70 milligrams per cent. In fact we have shown [2] that insulin injected in quantities up to sixty units failed to reproduce seizures in epileptic patients, even when the blood sugar was below 45 milligrams per cent. Nevertheless, patients with hypoglycemia frequently present convulsions. In a patient with seizures the history of mild hypoglycemic symptoms preceding the attacks, variability in the attacks, and their occurrence a long time after meals, are very suggestive of hypoglycemia.

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[1] Hrubetz, M. D.: Assay of Insulin and Blood Sugar Level, Am. J. Physiol., 107:264 (Feb.), 1934.

[2] Ziskind, E., and Bolton, Ruth: Insulin Hypoglycemia in Epileptics, Arch. Neurol. and Psychiat. (To be published.)

The individual symptoms of hypoglycemia are not at all specific. The proof of their origin depends on the demonstration of an associated low blood sugar. Inasmuch as the degree of hypoglycemia cannot be absolutely deduced from the clinical picture, it is necessary to test the blood sugar in the presence of symptoms. It is well known that at times a normal person may have a relatively low blood sugar. Hence a low blood sugar reading in itself is not diagnostic of clinical hypoglycemia. Before the diagnosis of hyperinsulinism is considered as established, clinicians should insist on the reproduction of hypoglycemic symptoms when the blood sugar is low and the disappearance of symptoms as the glycemic level is elevated. Fasting is the simplest and most readily available method for demonstrating hypoglycemia and its attendant signs.

Clinically, hyperinsulinism is manifested as a paroxysmal disorder. The blood sugar usually becomes elevated to normal after meals and remains so for two, three or more hours. Hence hypoglycemic symptoms tend to be present at the end of this time, *i. e.*, usually shortly before subsequent meals, or more frequently in the early morning hours, after the longest interval without food. Whether or not the blood sugar is depressed to a lower level by the carbohydrate in the diet than by the overnight fast is still an unsettled point. The early morning hours before breakfast were the most frequent for symptoms in our three patients with hyperinsulinism. Although hypoglycemic symptoms are usually of short duration, coma or confusion may last for longer periods if nourishment is not given. Food is not the only factor causing the termination of hypoglycemic attacks. Compensatory mechanisms may occasionally spontaneously overcome the hypoglycemia with disappearance of the symptoms. Following a convulsion in a patient with hypoglycemia, the blood sugar becomes elevated to normal. Failure to recognize this fact has led to the common error of ascribing a hypoglycemic origin to seizures when the blood sugar has been found normal after glucose was administered in the postconvulsive period.

In concluding, the following salient features about hypoglycemic symptoms may be stressed. The early findings are usually those explained on the basis of compensatory epinephrin effect, tachycardia, increased pulse pressure, pallor, perspiration, and dilated pupils. Later follow symptoms indicative of focal involvement of the central nervous system. The diagnosis of hypoglycemia should be withheld until the symptoms are reproduced in the presence of a low blood sugar. The symptoms are paroxysmal and occur at periods remote from eating. The diagnosis of pancreatic origin of the hypoglycemia, hyperinsulinism *per se*, is a matter chiefly of excluding other endocrine pathology and, finally, of exploratory laparotomy.

III.* HYPOGLYCEMIA

Fletcher B. Taylor, M.D. (400 Twenty-ninth Street, Oakland).—Hypoglycemia is a level of glucose in the blood which is low enough to be uncomfortable or dangerous. Amounts below 80 milligrams per hundred grams of blood may arbitrarily be included in the definition, since some individuals are uncomfortable at that level. Everyone has experienced the weak, trembly feeling that follows prolonged exertion on an empty stomach. This betokens a level somewhere near 80 milligrams per cent and as the level becomes lower still, definite weakness, faintness, and convulsions may result. Various individuals develop these symptoms at various levels, there being variable susceptibility to hypoglycemia among people. The speed of the drop in blood sugar probably also determines the amount of shock to the individual. During starvation treatment for diabetes there were quiet deaths from respiratory paralysis secondary to hypoglycemia, and without any preliminary convulsions.

It is in the care of diabetic patients that the problem of hypoglycemia is most practical. Starvation treatment is no longer in vogue, but insulin given hypodermically can cause a quick starvation of tissue and is thus even more capable of causing shock and death by hypoglycemia. We have also to deal with influences inside the body affecting the blood-sugar level. Pituitrin, thyroxin, and epinephrin raise the blood-sugar level. Insulin and parathormone decrease it. The pituitary action is probably not limited to that of pituitrin. An anterior lobe hormone represses formation of insulin, and its absence, as in adiposogenital dystrophy, conduces to hypoglycemia. Exercise decreases the blood-sugar level on the day of such exercise and sometimes even on the day following.

Insulin is the most intimate and necessary hormone in the control of carbohydrate traffic in the body. After food is absorbed and carbohydrate is negotiable in tissue fluids, insulin acts almost as a placement bureau. It deposits sugar in the liver when necessary; it releases it from the liver when needed elsewhere in the body and it may even assist in the oxidation of sugar once arrived at functioning tissues.

The various influences noted, and other known and unknown factors help control the amount of glucose in the blood, tending normally to balance and to keep the level within a zone of normal. Intake, assimilation, storage, mobilization, oxidation and excretion of glucose may vary its level in the blood.

A man who has very little food intake will tend to have hypoglycemia. If that man has poor digestion of starch because of defect in starch-digesting enzyme, there will be greater trend toward hypoglycemia. Assume that he has diarrhea with rapid transit of food through the small intestine which does not permit proper absorption. And imagine further that he has insufficient secretion of pituitrin, of thyroxin, and of adrenalin. Also add to his troubles a damaged liver, whether by atrophy, necrosis or by overgrowth with a neoplasm, so that he has insufficient storage space for reserve glycogen. Suppose, also, that our fictitious patient has too much insulin because of carcinoma of the islands of Langerhans; and that he is a Marathon runner, thus burning available carbohydrate rapidly. Then let us make his plight complete by assuming that the kidneys "leak" glucose, that the renal tubule cells are unable to conserve or reabsorb glucose. This one unlikely clinical example presents for our convenience a situation in which many known factors will all work in the direction of hypoglycemia. The converse picture need not be described and the possible variations are easily imagined.

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* The works and writings of T. L. Althausen, Joslin, Samson Wright, and Zondek are gratefully acknowledged as the principal background for this report.

Hypoglycemia is sometimes seen in the newborn, and it happens in some people who are on diet fads. A woman who was a very active horseback rider and a light eater fainted and fell from her horse because of it. A drunken person is weak and trembly on the "morning after" partly because of hypoglycemia. A diabetic patient of mine developed hypoglycemic shock on the basis of unusual exercise plus strong catharsis. Patients with pituitary cachexia, with Addison's disease and with hypothyroidism tend to have hypoglycemia, because of hormonal insufficiencies characteristic of these conditions.

A patient with acute liver damage from alcohol, from carbon tetrachlorid, from cincophen or from phosphorus is liable to hypoglycemia if there is sudden demand for glucose, because such a person has reduced carbohydrate storage space. High-fat diet gluts the liver with fat and decreases its glycogen storage space.

Insulin injections start reducing blood glucose immediately, the action is maximal at forty-five minutes and continues for at least two and one-half hours. Variable speed of absorption of the tissues at the injection site may modify these time factors. Protamin insulin has its effect more slowly, and may still be at work twenty-four hours after injection. Repeated injections of insulin at intervals of two and one-half hours or less, or of protamin insulin at twenty-four hours or less, may cause cumulative action and danger of hypoglycemia. Glucose evokes insulin production by the pancreas. Sudden withdrawal of continuous flow of glucose solution into the vein leaves a phase of rapidly forming insulin with decreased material to work upon and may cause hypoglycemia. Furthermore, the liver of such a person becomes passive in the formation of glycogen. It comes to depend upon the glucose available by vein. Ordinarily the liver furnishes glycogen from the fat and protein available, but after intravenous glucose therapy, the liver has a latent period in which it forms glycogen from protein and fat more slowly than usual. This secondary effect is then added to the sudden lack of glucose through the needle, and both factors tend to lower blood sugar. Long-continued intravenous administration of glucose should, therefore, be tapered off, not suddenly stopped.

Measures for control of hypoglycemia may be listed herewith, although they are inferred above. For acute drop in blood glucose, feed some glucose or sugar, a piece of candy, plain or sweetened orange juice. Glucose by mouth has been found to cause an appreciable effect in as short a time as five minutes. Warm the patient as a measure against medical shock. If the patient cannot swallow, give subcutaneous epinephrin 0.5, which will have effect within twenty to thirty minutes. Secure and start glucose solution by vein while waiting.

Hypoglycemia may be recognized by the presence of one or more of the following symptoms: hunger, tremor, nervousness, weakness, sweating, mask face, vertigo, aphasia, delirium, convulsions, lowering of body temperature and of blood pressure. If the patient is unconscious, the various other causes for unconsciousness must be considered. In diabetic patients it is well to be certain that the condition is due to *low,* not *high,* glucose level. Absent acetone and diacetic acid in the urine, absence of acetone breath, low temperature, coolness of skin, sweating, abrupt unconsciousness, and convulsions speak for abnormally low glucose and help in the differentiation. If there is uncertainty, a blood sugar determination by the micromethod may be done. Its accuracy is sufficient for the emergency and the observation can be completed in a few minutes.

Public Schools: First Aid and Lawsuits.—It is the law of this state that boards of education, school districts and their officers, teachers and other employees are liable for damages resulting from injuries sustained on school property when due to the dangerous or defective condition thereof, or to negligence on the part of school officers or employees. Therefore, when an accident occurs, skill on the part of the individual who administers first aid is important. A serious injury should be cared for by the most skillful person available, preferably a physician or nurse. In the absence of professional assistance the school authorities will not be held liable if standard first-aid procedure is followed by the principal, teacher, clerk or other employee who cares for the injured person.

Recently the Board of Education and some of its employees have been made defendants in actions which involved the question whether school employees rendered adequate first aid. It is, therefore, extremely important that competent people on the staff of each school should be capable of giving adequate first-aid assistance. When qualified first-aid workers are available, the school physician's time may be conserved for the more highly skilled services for which he is primarily employed.

Special care should be given to all wounds. A first-aid antiseptic should be used and a sterile dressing applied. A wound seen by a school employee which is not covered and which becomes infected (regardless of how many days later the infection occurs) may be the cause of a troublesome lawsuit.

It is well to remember that first-aid may be used as an approach to a closer contact between the first-aid worker and the student. Many a principal, physician, nurse, and teacher has developed a most satisfactory teacher-pupil relationship as a result of the services rendered in connection with accidents and injuries on the school grounds.

First aid properly administered may also be a first-class method of health education. The care and skill used by the first-aid worker in putting on a dressing may be a never-forgotten lesson in health education which will have a distinct carry-over value into adult life. Sometimes the irritating interruptions of our routine work are really opportunities in disguise.—Los Angeles City School District, Health Section.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

CALIFORNIA MEDICAL ASSOCIATION

EDWARD M. PALLETTE	President
HOWARD MORROW	President-Elect
W. W. ROBLEE	Speaker
MORTON R. GIBBONS	Council Chairman
FREDERICK C. WARNSHUIS	Secretary-Treasurer

THIS MONTH'S TOPICS[*]

ASSOCIATION ACTIVITIES

1. *Members, Read These Council Minutes.*
2. *Digest of One Hundred Forty-Seventh Executive Committee Meeting.*
3. *Sunday, September 27, 1936.*
4. *The Upper Sacramento Trek.*
5. *Persons per Physicians.*
6. *Club Dues Versus Medical Society Dues.*
7. *A Medical Racket.*
8. *County Secretaries' Conference.*

PUBLIC RELATIONS DEPARTMENT

1. *Costs of County Hospitals.*
2. *Unfair Practices.*
3. *Legislative Influence.*
4. *Immunization Suggestion.*

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ASSOCIATION ACTIVITIES

MEMBERS, READ THESE COUNCIL MINUTES

Members are urged to read the following Council minutes.

COUNCIL MINUTES[†]

Minutes of the Two Hundred and Forty-Seventh Meeting of the Council of the California Medical Association

Held in the Lounge of the Los Angeles County Medical Association building, 1925 Wilshire Boulevard, Los Angeles, at 9:30 a. m. Saturday, September 26, 1936.

1. **Call to Order.**—The meeting was called to order by the chairman, Morton R. Gibbons, with the following members present: President Edward M. Pallette, President-Elect Howard Morrow, Speaker W. W. Roblee, Chairman Morton R. Gibbons, Chairman of Public Relations Committee C. A. Dukes, Councilors Calvert Emmons, Carl R. Howson, Henry J. Ullmann, A. E. Anderson, K. L. Schaupp, O. D. Hamlin, C. E. Schoff, Henry Rogers, H. H. Wilson, C. O. Tanner, William H. Kiger, T. Henshaw Kelly, J. B. Harris, Editor George H. Kress, Secretary F. C. Warnshuis, and General Counsel Hartley F. Peart. Dr. Clarence G. Toland was present by invitation.

Absent: Councilor Alfred L. Phillips on account of the serious illness of his mother.

2. **Executive Minutes.**—The Secretary stated that the minutes of the one hundred and forty-seventh meeting of the Executive Committee had been mailed to all councilors, and on motion of Councilor Kiger, seconded by President Pallette, the minutes of the one hundred and forty-seventh Executive Committee meeting were approved.

It was moved by President-Elect Morrow, seconded by Councilor Kelly, that the minutes of the Executive Committee meetings be printed in the JOURNAL in digest form and that said digests be prepared by the chairman of the Executive Committee and the secretary. Carried.

3. **Hall of Medical Science Exhibit.** — Clarence G. Toland, Chairman of the Committee on the San Diego Fair, presented a progress report on the exhibit, together with outstanding bills payable amounting to approximately $1,000, and stated that an effort was being made to have this balance settled by the Fair management, and that a final statement would be submitted by Doctor Kinney.

It was moved by President Pallette, seconded by Councilor Kiger, that the Executive Committee be authorized to pay the expense of the outstanding bills for the exhibit at the San Diego Fair, after approval by the Auditing Committee. Carried.

It was moved by President Pallette, seconded by Councilor Roblee, that the Secretary be authorized to prepare a suitable scroll in appreciation of the work done by the Committee on the San Diego Fair and that copies be sent to the San Diego Society and the members of the Committee.

It was moved by President-Elect Morrow, seconded by Chairman of Public Relations Committee Dukes, that a vote of thanks be accorded the California Medical Association's Committee on the San Diego Fair. Carried.

4. **Postgraduate Conferences.** — Clarence G. Toland, Chairman of the Committee on Postgraduate Conferences, outlined plans for future conferences, stating that a liaison had been arranged with the State Heart Association and the State Tuberculosis Association so that their speakers would be used in these conferences.

5. **Health Exhibit.**—Editor Kress outlined a plan of amending the State Library Act to permit of the use of the remaining funds allocated to the State Library for the preparation of a traveling Public Health Exhibit, under direction of the California State Board of Health, for use at the 1939 Golden Gate International Exposition and at subsequent state and county fairs.

It was moved by Chairman of Public Relations Committee Dukes, seconded by Councilor Emmons, that the general plan outlined by Doctor Kress of amendment of the State Medical Library Act to permit the use of the remaining funds for the establishment of a health exhibit, be approved. Carried.

6. **Order of Business.**—It was moved by Chairman of Public Relations Committee Dukes, seconded by Councilor Ullmann, that the Council continue in session until 5 p. m.

7. **Report of Committee on Public Relations Hospital Insurance.**—The report of the Committee on Public Relations on policy of the Association regarding hospital insurance was read and discussed in detail.

It was moved by Councilor Kelly, seconded by Councilors Hamlin and Dukes, that the Council approve the plan of the Insurance Association of Approved Hospitals and the inclusion in that plan of reimbursement for clinical pathologic services and x-ray services for diagnostic purposes only.

A vote was then taken on the motion: 17 ayes; Doctor Wilson voted in the negative. Motion carried.

It was moved by Councilor Schoff, seconded by Councilor Harris, that the Council approve the plan of the Intercoast Hospitalization Insurance Association and the inclusion in that plan of reimbursement for clinical, pathological, and x-ray services for diagnostic purposes only. Carried.

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[*] All articles listed under this caption, "This Month's Topics," have been written and sent to the editor by the Association Secretary, Dr. Frederick C. Warnshuis.

[†] The minutes of the two hundred and forty-sixth meeting of the Council of the California Medical Association were printed in the July, 1936, issue of CALIFORNIA AND WESTERN MEDICINE, page 97.

8. **Corporate Practice.**—The General Counsel read the proposed letter on corporate practice prepared in accordance with Resolution No. 8, adopted by the House of Delegates at Coronado, and gave a résumé of the present statutes covering this type of practice.

It was moved by Councilor Wilson, seconded by Chairman of Public Relations Committee Dukes, that a copy of the letter be sent to each county secretary with the request that it be read at the next meeting of the Society; that copies be sent to all hospitals and sanitariums; and that the letter be published in the JOURNAL for the information of all members. Carried.

9. **Code Commission.**—After discussion of the necessity of constant vigilance in the recodification of the Medical Practice Act, and of medical and health laws by the California Code Commission, it was moved by Editor Kress, seconded by Councilor Kelly, that a subcommittee, consisting of the Chairman of the Council, the President-Elect of the Association, the Secretary, the Chairman of the Legislative Committee, and the General Counsel, be appointed to handle the whole matter of recodification of medical and health laws and that it be authorized to secure the assistance of an attorney at Sacramento and to expend the necessary funds, subject to approval by the Auditing Committee. Carried.

10. **Legislation.** — Doctor Harris, Chairman of the Legislative Committee, submitted a progress report on pending and contemplated legislation.

11. **Hospital Insurance.**—After full discussion of hospital insurance, it was moved by Councilor Kelly, seconded by Councilor Ullmann, that a committee of three members of the Council be appointed by the Chairman to study and develop a form of state-wide organization to furnish hospital and/or medical care on a periodic basis; to formulate legislation if found necessary; and to report to the Council not later than November 1, 1936.

The Chairman appointed Councilors Kelly, Kiger, Chairman of Public Relations Committee Dukes, and F. F. Gundrum.

12. **Noon Recess.**—At this point a recess was declared for luncheon.

13. **Call to Order.**—The Council was called to order by Chairman Gibbons, after the noon recess, with the following members present: Doctors Pallette, Morrow, Roblee, Gibbons, Emmons, Howson, Ullmann, Anderson, Schaupp, Rogers, Wilson, Tanner, Kiger, Kelly, Harris, Dukes, Warnshuis, Schoff, Hamlin, Editor Kress, Counsel Peart. Absent: Doctor Phillips.

14. **Committee on Survey of Expenditures.**—Doctor Schoff, Chairman of the Committee on Survey of Expenditures, stated that he was not ready to submit his final report and requested that this be made an item of business for the next meeting of the Council.

15. **Appeal Hearings.** — General Counsel Peart submitted briefs of the California Medical Association in the matter of the appeals of Ferd Callison, et al., San Francisco, and Joe Smith, et al., Kern County, before the Judicial Council of the American Medical Association.

The Secretary stated that Doctor Elbridge Best would represent the Council in the San Francisco appeal and that Louis Packard would represent the Council in the Kern appeal and that Chairman of the Public Relations Committee Dukes would act in an advisory capacity in both appeals.

The Secretary presented requests from the San Francisco and Kern County societies for payment of the expense incurred by Doctors Best and Packard, representing the Council in appeals before the Judicial Council of the American Medical Association.

It was moved by Councilor Kiger, seconded by Councilor Kelly, that the expense incurred by Doctors Best and Packard in representing the Council in the appeal hearings before the Judicial Council of the American Medical Association in Chicago be paid; it being understood that no precedent is established thereby. Carried.

16. **Legislative Program.**—The General Counsel suggested the advisability of preparing a definite legislative program for the next legislative session. Mr. Peart suggested that the following amendments to the Medical Practice Act be prepared in consultation with the Attorney-General's office, to be used, if found necessary, by the Legislative Committee: (*a*) Express exclusion of corporate practice; (*b*) express inclusion of radiology, clinical pathology and anesthesiology; (*c*) exclusion of delegation of professional duties to laymen; amendment to forbid advertising of fixed fees. Mr. Peart also suggested that amendments should be prepared relating to the definition of indigency; amendments to the Non-Profit Hospital Service Act; and amendments to the Code of Civil Procedure to provide for reasonable compensation for opinion evidence.

It was moved by President Pallette, seconded by President-Elect Morrow, that a committee of two be appointed to confer with the State Board of Medical Examiners regarding proposed legislation in which they are interested and report back to the Executive Committee. Carried.

17. **Physician's Handbook.**—The proposed outline of a physician's handbook was presented and it was stated that it would be well to publish this in CALIFORNIA AND WESTERN MEDICINE and furnish reprints to physicians.

It was moved by Chairman of Public Relations Committee Dukes, seconded by Councilor Rogers, that the physician's handbook as outlined by the General Counsel, the Editor, and the Secretary, be approved and that they be instructed to undertake its preparation. Carried.

18. **California Forestry Medical Corps.** — The attention of the Council was called to a telephone communication and correspondence received by the Editor relative to an article appearing in the JOURNAL regarding the Forestry Medical Corps. Doctor Warnshuis stated that the article contained a true statement of facts and that the Medical Corps had been reorganized and that during the Los Angeles and San Diego fires only members of the Forestry Medical Service of the California Medical Association were permitted to serve.

19. **Drugless Practitioners.**—The attention of the Committee on Legislation was called to the fact that the drugless practitioners were endeavoring to secure licenses as physicians and surgeons and their own licensing board.

20. **Qualifying Certificate Act.** — Editor Kress stated that the Committee on the Qualifying Certificate Law was at present working on the law and would report at a later date.

21. **Paper for Publication in Journal.**—The attention of the Council was called to the violation of Sections 4 and 5 of Chapter VII of the by-laws of the Association by a member who had permitted a paper much like one presented at the Coronado session to be published elsewhere without permission of the Publications Committee.

It was moved by Editor Kress, seconded by Councilor Kelly that the matter be referred to the chairman of the Committee on Scientific Work for investigation. Carried.

22. **Roster of Association Members.**—It was moved by Editor Kress, seconded by Councilor Ullmann, that hereafter the roster of members be published in December of each calendar year and that the roster for 1936 be published in the December, 1936, issue of the JOURNAL. Carried.

23. **Contraception.**—It was the sense of the Council that no policy relating to contraception be adopted until the American Medical Association declares its attitude upon this question and that, therefore, the subject be not given space in our official publication.

24. **Paper for Journal.**—Discussion of the publication of a series of papers by one author on recent studies in industrial medicine was acted on by the following motion:

It was the sense of the Council that if the author desired to prepare the papers the Publications Committee would give them consideration and determine whether they would be accepted for publication.

25. **Articles in Journal.**—On motion of Editor Kress, seconded by Councilor Kelly, it was

RESOLVED, That articles appearing in CALIFORNIA AND WESTERN MEDICINE be not released to business firms for advertising and publicity purposes and that authors be advised that ownership of these papers passes to the Association under the rules governing publication and the provisions of the copyright law.

26. **Dues of Association.**—It was moved by Editor Kress, seconded by Councilor Emmons, that it is the sense of the Council that editorial comment should be

made in order to transmit to all members the reasons and circumstances that created the necessity for an increase in Association dues for 1937. Carried.

27. **Annual Conference of County Secretaries.**—The Secretary presented a tentative program for the annual conference of county secretaries and officers.

It was moved by President Pallette, seconded by Speaker Roblee, that the annual conference of county secretaries and officers be held in San Francisco during the first week of February and that the travel expenses of county secretaries be paid by the Association. Carried.

28. **Legislative Coöperation.**—Letters from the State Board of Health and State Board of Medical Examiners signifying their willingness to coöperate in legislative matters of mutual interest were presented by the Secretary for the information of the Council.

29. **Reinstatement of Members.** — It was moved by Councilor Ullmann, seconded by Councilor Rogers, that members whose dues have been accepted by county secretaries since April 1, 1936, be reinstated to membership in the California Medical Association. Carried.

30. **Financial Statement.**—On motion of Councilor Ullmann, seconded by President-Elect Morrow, and carried, the financial statement for the month of August, 1936, was approved.

31. **Medical Society of the State of California.**—After discussion of the value of membership in the medical society of the State of California, it was moved by Chairman of Public Relations Committee Dukes, seconded by President Pallette, that the Secretary and the Editor be instructed to prepare, with the guidance of the Legal Counsel, an outline of a talk to be given by councilors at county society meetings in their respective districts, and that a letter to members imparting the advantages of membership in the medical society of the State of California be prepared by the Secretary. Carried.

It was the sense of the Council that a standing "ad" be run in the Journal advising members of the advantages of membership in the medical society of the State of California, and that a column citing typical cases and experiences be inaugurated in the Journal, under the supervision of the Editor and the General Counsel.

32. **Relation of Malignancy and Trauma.**—It was moved by Chairman of Public Relations Dukes, seconded by Councilor Schaupp, that the institution of a study on relationship between malignancy and trauma, as ordered by Resolution No. 6, adopted at Coronado by the House of Delegates, be referred to the Cancer Commission in conjunction with the Committee on Industrial Practice for report and recommendation to the Council. Carried.

33. **Cancer Commission.** — Doctor Dukes, Chairman of the Cancer Commission, stated that the Cancer Commission desired to make a further study of the cancer problem and moved that $500 be allocated to the Commission for clerical work and further education of the medical profession and the laity and for revision of the report of the Cancer Commission. The motion was seconded by Councilor Ullmann. A vote was then taken: 4 ayes; 9 noes. Motion defeated.

34. **Arrangements Committee.** — The Secretary reported that Chairman Gibbons had appointed as members of the Arrangements Committee, J. A. Merrill, Monterey, Chairman; Mast Wolfson, Monterey; Paul M. Hunter, Carmel; H. Spencer Hoyt, Monterey; and E. F. Kehr, Carmel, Secretary. The Arrangements Committee as appointed by the Chairman was approved by the Council.

35. **Trustees of the Indemnity Defense Fund.**—On nomination duly made and ballot duly cast, Howard Morrow was elected as trustee for the Indemnity Defense Fund, term expiring in 1937.

On nomination duly made and ballot duly cast, Junius B. Harris was reëlected as trustee for the Indemnity Defense Fund, term expiring in 1939.

36. **Death of William Duffield.** — It was moved by Speaker Roblee, seconded by Councilor Howson, that the Secretary prepare a suitable resolution on the death of William Duffield and that a copy of the resolution be sent to the bereaved family and inscribed in the minutes of this Association, and that when the Council adjourn it do so in the memory and respect of William Duffield. Unanimously carried by a rising vote.

William Duffield, M.D.

1866-1936

No matter when it comes, at the beginning or zenith of a career, death is an unwelcome guest. We try to understand the meaning and the loss of a fellow associate, but our thoughts become subdued as we see the vacant chair and the empty forum, and only realize that our associate is no longer in our midst.

On September 9, 1936, William Duffield heard the summons from beyond the Great Divide and stepped out into the night and wandered on into an unknown land.

The Council of the California Medical Association, on behalf of the membership, therefore adopts the following resolution by a rising vote on September 26, 1936.

Whereas, William Duffield's life labors are ended, it is earned recognition to record that he has served fellow practitioners and this Association in the discharge of official duties for many years as a member of the Council; and

Whereas, In his relations with his fellow man he was kindly, helpful and generous, in his professional work he was an ethical and scientific practitioner of the healing art, and in his relations to organized medicine he was an enthusiastic worker for the upholding of the standards of medicine and the promotion of the highest aims of medical art and science; now therefore be it

Resolved, That in the death of Dr. William Duffield the public has lost a true friend, the members of the medical profession a much-beloved coworker, and organized medicine and the members of the Council of the California Medical Association a true and faithful servant of medicine; and be it further

Resolved, That a copy of this resolution be spread upon the minutes of the Council, a copy be printed in California and Western Medicine and a copy sent to his bereaved family.

37. **County Hospitals.**—It was moved by Speaker Roblee, seconded by President-Elect Morrow, that the following resolution, as adopted by the Riverside County Medical Association, be approved by the Council:

Whereas, The recent decision of the California Appellate Court makes it permissible for the supervisors of the county to admit to the Riverside County Hospital part-pay patients as well as indigents; and

Whereas, The members of the Riverside County Medical Association, in conjunction with the resident staff, have heretofore been responsible for and assumed the care of indigent patients at the Riverside County Hospital; and

Whereas, All services by the visiting staff have been rendered gratuitously; therefore be it

Resolved, That the Riverside County Medical Association go on record as objecting to the care of part-pay patients who are financially able to make arrangements for private hospital care; and further be it

Resolved, That all admittance of part-pay patients to the Riverside County Hospital be submitted for review to a representative or representatives of the Riverside County Medical Association by the Social Service Department of Riverside County; and be it further

Resolved, That the Council of the California Medical Association endorse these resolutions and/or offer a plan of procedure that will adequately define the relation of the members of the California Medical Association to county hospitals.

A vote was then taken on the resolution. Motion carried. Doctor Dukes voted in the negative.

38. **Anesthetics Case.**—The following letter, prepared by the Auditing Committee, outlining the financial responsibility of the anesthetists and the Association in the case of *Francis* vs. *Nelson* and clarifying the matter of printing and legal costs, was read to the Council.

It was moved by Councilor Schaupp, seconded by Councilor Kelly, that the letter as presented together with the recommendations contained therein be approved. Carried.

To the Council of the California Medical Association,
San Francisco.

Gentlemen:

The Auditing Committee, as directed by the Executive Committee at its meeting on August 15, 1936, has reviewed the matter of the finances of the *Francis* vs. *Nelson* case in Los Angeles County and submits the following report for the consideration of the Council.

The original agreement made with Dr. Chalmers-Francis, representing the anesthetists, and the Council, when he appealed to the Council for aid after obtaining an adverse decision in the case begun independently of the Council, provided:

1. Council agreed to appropriate $750 for expenses and $750 for legal services of its own in obtaining a decision

in the case, the understanding being that the legal counsel of the California Medical Association would be responsible for the conduct of the case after the appropriation of this money.

2. The anesthetists agreed to contribute $750 toward the costs of appeal.

3. The anesthetists agreed that if costs exceeded these amounts they would reimburse the California Medical Association in any amount above the original appropriations.

Investigation of the facts show that many of the statements made in Dr. Chalmers-Francis' letter of July 24 are not according to the record.

1. The brief that Dr. Chalmers-Francis had printed (in galley proof only) in Los Angeles for $152.15 had not been approved by Mr. Peart as agreed upon and lacked the printed testimony from the record and which was used in the brief. This is required by law, and required 146 pages additional. Therefore, Doctor Chalmers-Francis' statement that the difference in cost between printing in San Francisco and Los Angeles was $544.43 minus $152.15 is unwarranted.

2. When the closing brief was ready for printing, estimates were obtained in both cities, and on January 14, 1936, Attorney Anderson of Los Angeles wrote to Mr. Peart: "I feel that since the expense is practically the same, you had better have the brief printed there, and direct you to do so."

3. The statement that the printing could have been done for $179 is, therefore, manifestly not true.

Thus, the Auditing Committee recognizes that the debt of $450 is a perfectly legitimate one under the original agreement with the Council and is not subject to any of the criticisms referred to above.

If the Council wishes to do so, however, the Auditing Committee suggests that, in order to close the finances of the case and to meet the anesthetists part way at least, it abrogate the terms of the original agreement, accept the check for $179 and charge the $271 remaining as the price of a resolution. The resolution should be to assume no further litigation which may be started by enthusiastic members with the hope that, if it does not proceed successfully, the California Medical Association will carry on.

Respectfully submitted,
THE AUDITING COMMITTEE.
(Signed) Karl L. Schaupp, M. D., *Chairman.*
O. D. Hamlin, M. D.
T. Henshaw Kelly, M. D.

39. **Woman's Auxiliary.** — It was moved by Speaker Roblee, seconded by Councilor Kelly, that the Woman's Auxiliary be granted the sum of $150 for expenses at the 1937 annual session at Del Monte. Carried.

40. **Telephone Listings.**—Letter from H. S. Hunsberger protesting listings in the Telephone Directory under the heading "Laboratories and Medical X-Ray," was presented.

In view of the fact that the matter of telephone listings is under the control and direction of the State Railway Commission, on motion of President-Elect Morrow, seconded by President Pallette, the Secretary was instructed to reply to Doctor Hunsberger advising him of the past experience of the Association and its unsuccessful efforts to regulate these listings. Carried.

41. **Date of Council Meeting.**—It was moved by President Pallette, seconded by Councilor Schoff, that the next meeting of the Council be held on the Sunday following the annual conference of county officers, *i. e.*, February 7, 1937.

42. **Hospital Insurance.**—It was moved by Councilor Harris, seconded by Councilor Kelly, that the Council reconvene at 10 a. m. Sunday morning, September 27, for the consideration of hospital and/or medical service plans. Carried.

43. **House of Delegates Procedure.**—Councilor Howson brought up the matter of procedure in presenting resolutions to the House of Delegates.

After discussion, it was moved by President Pallette, seconded by Councilor Kelly, that a Committee of Three prepare and present to the House of Delegates amendments to the by-laws, providing for an increase in the number of reference committees and sessions of the House of Delegates during annual sessions. Carried.

44. **Adjournment.**—At this point the Council rose in silent tribute to Doctor Duffield, and adjourned in respect of his memory.

MORTON R. GIBBONS, *Chairman.*
F. C. WARNSHUIS, *Secretary.*

DIGEST OF ONE HUNDRED FORTY-SEVENTH EXECUTIVE COMMITTEE MEETING

Held August 15, 1936.

Legislation was discussed and plans outlined for presentation to Council.

Council's answering brief to appeals pending before the American Medical Association was arranged for.

Hospital insurance rider was referred to Committee on Public Relations for report at September Council meeting.

General Counsel was instructed to draft letter in accordance with Resolution No. 8 adopted at Coronado.

Secretary, Editor, and General Counsel were instructed to prepare syllabus of proposed legal handbook for Council consideration.

Suggestions of plans to increase membership of medical society of the State of California were referred to the Council.

Reprints of revised Constitution and By-Laws were ordered.

Council meeting fixed for September 26, 1936, in Los Angeles.

KARL L. SCHAUPP, *Chairman.*
F. C. WARNSHUIS, *Secretary.*

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SUNDAY, SEPTEMBER 27, 1936

The Council, in accordance with a motion made by Councilor Harris, convened at 10 a. m. for the discussion and consideration of hospital and medical service plans and legislation proposed by several lay groups and organizations.

The subject was presented by Doctor Harris who tersely outlined and analyzed in great detail the present trend of legislation and proposed solutions as they relate to medicine and medical care.

Every councilor, President Pallette, President-Elect Morrow, and Editor Kress engaged in the discussion, thereby presenting the views of members in every councilor district.

At 1:00 p. m., after three hours of special deliberation, the Council adjourned, after instructing the special committee to be guided by the facts that had been presented.

F. C. WARNSHUIS, *Secretary.*

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THE UPPER SACRAMENTO TREK

Dr. Clarence G. Toland, during his term as president, was the first officer who undertook to visit as many county societies as possible during his presidential year. Last year President Robert A. Peers established a record by visiting every county society. These officers were accompanied by the councilor in the district that was visited and by the State Secretary. Because of the number of societies and the large area covered by their districts, Councilors C. E. Schoff and Henry S. Rogers contributed the most time to the making of these visits.

In general, the purpose of these visits is to meet with the members of each county society, to gain an insight of local conditions, to discuss policies and activities and to impart an insight as to state activities. Keen interest was manifested in every unit. Members gained information as to what a united association was accomplishing in their behalf and perceived new value in their membership. As a result we are witnessing a wholesome renewal of activity and state-wide interest in our Association affairs. Our purposes of organization are being attained in greater degree.

Ours is a vast state. These visits consume a large amount of time that is contributed by our presidents in behalf of all members. Last year President Peers and the Secretary traveled 20,603 miles by automobile and nearly 4,000 miles by train to make these visits. Wonder if the officers of any other state covered any such area.

On October 8, President Pallette set out on his 1936-1937 trek of visits to county societies. He was accompanied by President-Elect Morrow, Councilor C. E. Schoff, and the Secretary. Meetings were held with the Yolo-Colusa-Glenn Society at Woodland, a breakfast conference in Sacramento, Yuba-Sutter at Marysville, Butte at Chico, and Tehama and adjacent societies at Red Bluff.

Sunday was consumed in driving back to San Francisco, where President Pallette boarded the train arriving in Los Angeles Monday morning.

Every meeting was inspiring by reason of large attendance, the interest exhibited and the questions, comments and discussions that characterized these meetings. A splendid spirit exists among these upper Sacramento Valley societies, and their officers and committees are alert in their discharge of official duties. We point with pride to all of our county societies.

Itineraries have been made for visits to other regions in the State before our annual session in May.

* * *

PERSONS PER PHYSICIANS

Physician-population relationship studies uncover some interesting and thought-provoking figures.

In California there is one physician to 519 people, in comparison with Rhode Island 1 to 737, South Dakota 1 to 1,196, and South Carolina 1 to 1,541. In New York's Manhattan Borough 1 to 287, Boston 1 to 290, Washington, D. C., 1 to 297. In San Francisco the ratio is 1 to 345, and in Los Angeles 1 to 384.

While reports indicate that the ratio of physicians to population is decreasing, there is no complaint as to scarcity of physician's services. Good roads and hospital facilities permit the obtaining of adequate care. However, the steadily increasing migration to and location in centers of population and metropolitan areas, with their higher office and living expenses, may compel eventually the relocation of physicians in rural areas.

* * *

CLUB DUES VERSUS MEDICAL SOCIETY DUES

Ever and anon a complaint is received in regard to medical society membership dues. As a rule the complaining member is a member in name only, he attends his county and state meetings on rare occasions and is possessed of little information as to what is being done in defense of his profession or to prevent outside encroachment on his practice and livelihood. By non-attendance he neglects opportunities to improve his professional ability and standards of practice.

When questioned it is found that the complainant is a member of several clubs and lay social organization. He pays from $75 to $150 for the privilege of playing golf. Dues of $60 to $125 are paid for admission to a club where he can pay 85 cents to $1.25 for his noon lunch, an hour of bridge, billiards or checkers, and say "Howdy" to the banker, lawyer or merchant Pooh Bah of his town. He readily remits $50 to $100 per year to some luncheon club where he can sing the "old songs," be called Jack, and listen for thirty minutes to some imported speaker describe how a can is made in six operations from one small piece of tin. Then there is the lodge, church, fishing or skeet club, and possibly one or two other lay organization. All told, his nonmedical organizations tap him for from $200 to $400 for yearly dues. His medical society dues averages from $20 to $50 per year—the average being about $25 per year.

Criticism is not directed against membership in these organizations, provided income permits. Criticism is directed against such membership when complaint is made, "we are paying too much for what we get." That claim is challenged because facts exist to disprove that statement. The trouble is that this member has never taken the pains to ascertain or acquire the full benefits or membership in his county medical society. He can secure the facts by reading the editorials and Association activities columns in the preceding twelve issues of CALIFORNIA AND WESTERN MEDICINE. For value received a physician obtains more from his medical dues than he obtains from his dues paid to nonmedical organizations. The value of returns is so great and membership benefits so vital that an eligible physician cannot afford *not* to be a member.

* * *

A MEDICAL RACKET

Six times as many patients sued their doctors in 1935 as in 1921. Present conditions indicate that in this year one doctor in twenty will become a defendant in a malpractice suit.

The situation is one in which lawyers and designing patients conspire to obtain fees. Certain members of the legal profession seem to have a bend that impels them to distort and enlarge facts and advance most unreasonable claims and frame-ups in their quests for financial income. Patients are more damage-minded and have little difficulty in obtaining a lawyer to accept their case. The situation is becoming more and more serious all over the country. We are being impelled to undertake defensive measures to expose and end this lawyer-patient racket. It is a racket because, of suits coming to trial, only five per cent result in a verdict against the doctor. However, only a small percentage come to trial, as the "making of a settlement" is sought and often agreed to by the insurance company.

Pending the termination of this racket, members are urged to join the medical society of the State of California, thereby securing a personal attorney who will protect your personal interests and rights and joining with the insurance carriers' counsel, every effort will be made to protect you and defeat unjust claims.

Membership application blanks may be secured from the State Secretary.

* * *

COUNTY SECRETARIES' CONFERENCE

The Council has designated Saturday, February 6, 1937, as the time for holding the annual conference of county secretaries in San Francisco.

These conferences were inaugurated last year. Their value has been determined, hence their continuance.

In due time announcements will be made of the program and full details sent to every secretary. Mark the date in your engagement book.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

Costs of County Hospitals

Recent press reports state that a grand jury in San Joaquin County declared: "Uncovered a condition in the highway department, in the road districts, and in the county hospital . . . that points to unlawful and high-handed procedure of long standing." The report states: "There is no escape from fraud and favoritism in county purchasing until the county provides its own charter."

Commenting on the pay-patient system in the county hospital, the report states: "The pay-patient system appears to have been honeycombed with supervisorial patronage. We find the name of one supervisor, as well as the names of other persons, who have received treatment as pay patients and who never have paid." The report recommends steps be taken to install a more effective system of collections from pay patients at the hospital and states the record shows the names of many who have never made any effort to meet their obligations. Of course the taxpayers paid the bill in their taxes.

That these practices on the part of county hospitals and supervisors do increase taxes and operating costs, is evidenced by these figures from Kern County. Last year *90 per cent* of the people in Kern County who required hospitalization were hospitalized in the county hospital. It is difficult to conceive that 90 per cent of Kern County residents are indigent. Ever increasing costs are evidenced by these figures: In 1921 the cost was $44,634. In 1931, $212,493, a 400 per cent increase, with a population increase of 50 per cent. In 1932 the cost was $240,102; 1933, $251,934; 1934, $266,078; 1935, $365,647. These figures do not include costs for the tuberculosis sanitarium. For 1936 the budget provides $372,197.

In contrast, San Bernardino County can be cited where in two years the county hospital costs have been reduced from $346,404 to $239,857, a saving of $106,547, or 30 per cent, of the taxpayers' money.

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† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

A few more grand jury reports in other counties might be inspired in the interest of taxpayers and the removing of county hospitals from the control of supervisors and placing them under an institutions commission. In Sacramento the charter provides: "The Sacramento County Hospital shall be maintained for county indigents only." As the local paper states: "This leaves the door wide open to admit all the deserving. But closes it tight to undeserving chiselers such as those who in San Joaquin County apparently pass on their medical costs to the taxpayers."

* * *

Unfair Practices

There are some detail salesmen, by reason of a "peeve" because some physicians will not grant an audience or see them, who resort to a whispering campaign by means of which they utter reflections and undermining comments about that doctor to other doctors, and even lay individuals. We recently encountered such pettiness.

We are certain that the firms employing these salesmen do not condone or tolerate such practices. We are also certain that when salesmen indulging in spite practices are reported to the sales manager that they will be dealt with as they deserve. This Association's central office will appreciate members reporting these tale-bearing salesmen in order that their conduct can be reported to their employers.

* * *

Legislative Influence

By way of introduction, the following quotations are presented:

Edward L. Bernays said: "As civilization has grown more complex, the transmission of ideas has been quickened. As competitive forces have multiplied and sharpened, it has become increasingly apparent to all groups that they must win and obtain public approval if they are to survive in the welter of competitive forces struggling for public favor."

And Bruce Barton warned business men to cease spending so much time fighting political demagogues and governmental meddling and more time winning the favor of people.

Our legislative influence and power is dependent upon the degree in which we enlist public opinion and public favor. To win that favor and support it is necessary to engage in a sustained campaign that utilizes certain measures that may be designated as technique.

Mac F. Cahal has said that our legislatures, as we know them, are a government of minorities, of high-pressure tactics and private motives. That every law is the result of a mobilized group—a unit of force. Our scheme of organization provides that mobilized unit and force, provided that we remain cohesively united and active. Our high pressure shock troops can be and are enlisted by County Legislative Committees. We have mobilization methods that will generate pressure power if we guide our movements.

Public approval is best obtained by working through existing public guilds, Parent-Teacher and similar organizations. In approaching these groups there must be a predetermined form of appeal. Some form of psychology should be decided upon, for experience has demonstrated the value of employing psychological persuasion. As Cahal recommends, "If we have a bill for compulsory vaccination we will appeal to parental love. For a basic science law we must appeal to fair play." Greatest results are obtained by emotional appeals. Literature containing emotional appeals, by actual tests, has been found to be remembered three times as long as literature that presented actual data.

Next come symbols. To refer to a bill as a proposed law creates little interest and arouses little support. Again quoting Cahal: "Baby Health Bill will be more effective than vaccination law, and health-protection bill will be more effective than basic science law."

Medicine for self-preservation must win and hold public favor. To do this no opportunity should be lost to present to individuals and groups the ideals and policies of our profession. Demonstrations of our sincere, unselfish, and constructive purposes for man's physical welfare must continue unceasingly along the widest avenues of public approach. Every member should recognize the part he must assume. Without that coöperation our legislative influence will sink into ineffectiveness.

Having secured public favor and support, one more activity is necessary. Your senators and assemblymen are to be contacted and informed as to what measures are endorsed and the measures which are opposed and that the recommendations made have the endorsement, favor, and support of their community. These representatives must be made to realize that it is incumbent upon them to act accordingly. By so doing, the pressure is applied—without application all effort is for naught.

When every county unit recognizes and follows this technique, our legislative influence will function for not only our good, but for the greatest good of all who live in this great commonwealth. We shall shortly be confronted with the necessity of exhibiting our influence when the legislature convenes. Therefore, begin now to secure public favor!

* * *

Immunization Suggestion

It is recognized that every physician should extend his professional services to include preventive medicine. Failure to do so creates the necessity for health officers to step in and engage in the practice of preventive medicine. If health officers are invading the field of medicine in your community, the reason lies in the fact that physicians are not practicing preventive medicine and are negligent in providing immunization measures for their patients.

County societies should take steps to correct this neglect and to urge every member to cause all of his patients and families to be protected by preventive methods. An eastern county medical society has adopted a form letter and urges its members to address the communication to the families whom they serve.

The form is as follows:

————, 193——

Dear Mrs. ————:

Our records show that a child whom you named ———— was born six months ago. We know that you desire to give ———— every opportunity for health and strength, and we wish to remind you that this is the time to give the simple treatment which will protect ———— against diphtheria.

Diphtheria is a serious disease for young children, so serious that the protective treatment should be given now. The Medical Society of the County of ————, of which I am a member, is coöperating with the state and local Departments of Health, and has asked me to send this message to you urging that unless your child has already been protected you may have this important matter taken care of.

————————, M. D.,

You have no justified complaint against your health department if you fail to practice preventive medicine.

COMPONENT COUNTY MEDICAL SOCIETIES

HUMBOLDT COUNTY

The Humboldt County Medical Society met on the evening of August 6 at the Eureka Inn, with President J. S. Woolford presiding. Twenty members were present. Dr. Edwin I. Bartlett of San Francisco was the guest speaker.

The Society went on record as being in favor of the State Association increase in dues from $10 to $15. Immediately our local dues were raised $5.

Doctor Bartlett, with the aid of films, presented a very interesting paper on *Bone Tumors*, which was widely discussed by Doctors Markel and Norman.

* * *

The Humboldt County Medical Society met on the evening of September 3, with a dinner at the Humboldt County Tubercular School. The president, J. S. Woolford presided. Dr. Philip H. Pierson of San Francisco was the guest speaker.

Doctor Pierson's address was on the subject *How Every Doctor Should Participate in a Tuberculin Testing Campaign.* This paper was very interesting and widely discussed.

LAWRENCE A. WING, *Secretary.*

MARIN COUNTY

The regular monthly meeting of the Marin County Medical Society was held on September 24, with a good attendance. Dr. G. M. Landrock, a former member, who is now practicing proctology in San Francisco, gave a very interesting and educational talk on his specialty. He presented many good slides which were most interesting to the general practitioner.

C. W. CLARK, *Secretary.*

MONTEREY COUNTY

The regular October meeting of the Monterey County Medical Society was held at the Forest Hill Hotel, Pacific Grove, on October 1.

Amendment of the by-laws of the Society in regard to disciplinary procedures was unanimously carried, thereby placing members under the disciplinary code of the State Association.

The applications for membership of Dr. Howard E. Clark of Monterey and Dr. Edwin M. Chase of Soledad were accepted.

The secretary reported the action of a committee planning an exhibit at the Monterey County Fair on October 8, 9, 10 and 11, and upon motion duly made and seconded, this action was properly endorsed by the Society.

Doctor Merrill reported that upon an ordinance passed by the County Board of Supervisors any member of the county society may admit patients directly to the County Hospital for emergency purposes. Other admittances must be passed upon by the Welfare Department of the county.

Doctor Spencer Hoyt presented case reports of urologic cases, with x-rays and lantern slides, and followed with a review of the anatomy of the prostate gland. Dr. Lawrence M. Knox presented a case of extensive ulcerative colitis, with the x-rays and necropsy specimens. Dr. Edwin F. Kehr presented the literature and case reports on the use of protamin insulin.

E. F. KEHR, *Secretary.*

SACRAMENTO COUNTY

The regular meeting of the Sacramento Society for Medical Improvement was called to order by President Frank MacDonald at the auditorium on Twenty-eighth and L streets on September 15. There were fifty-five members and guests present.

Dr. J. B. Harris presented the case of a middle-aged white woman suffering from recurrence of an adenocarcinoma of the left breast for which radical mastectomy had been performed seven years ago. Visible metastases in the axillary region had appeared five and one-half years after operation. The interesting feature of this patient was the extreme size of the left arm and forearm, caused by obstruction of the lymphatics by the tumor tissue. This patient required from 15 to 20 grains of morphin sulphate daily for the pain occasioned by the malignant invasion of the brachial plexus.

The speaker of the evening, Dr. Edmund Butler, chief surgeon of the Emergency Hospital Service of the City of San Francisco, was introduced by the president. Doctor Butler spoke on *Injuries of the Chest and Abdomen That May Cause Early Death, and the Diagnosis and Treatment.*

Chest or abdominal injuries and their complications occur largely in industry and as a result of automobile accidents. These may result in sudden death, or death may follow regardless of treatment. Ten per cent of all deaths due to chest injuries may be prevented. Many wounds of the chest and abdomen are caused by shattering of the steering wheel in automobile accidents, with penetration by the spokes. There may be multiple fractures of the bones of the thoracic wall, with contusions and lacerations of the lung and chest wall. This may be accompanied by either open or closed pneumothorax, hemothorax, hemorrhage from intercostal arteries, complete fracture of the sternum, or puncture wounds of the lungs due to depressed rib fragments. In addition to treating these patients for shock, which is nearly always present, Doctor Butler stressed the importance of controlling hemorrhage from intercostal arteries by suturing around the entire contiguous rib if necessary. Closing an open pneumothorax, due to a puncture wound, may be done by suturing the soft parts if possible, or by sealing rubber tissue over the opening. The aspiration of air may relieve the pressure in the closed type of pneumothorax. The presence of pneumothorax embarrasses respiration through displacement of the mediastinum with impairment of function of the contralateral lung. Elevation of depressed rib fragments may be accomplished by means of towel clips, and complete fractures of the sternum with depression are well relieved by extension and traction with towel clips also. Puncture wounds of the chest with lung hemorrhage may be controlled with packing through a proctoscope. Subcutaneous emphysema causing distress may be relieved by incision where it is superficial. Cardiac lacerations when diagnosed must be repaired. Traumatic diaphragmatic hernia must also be treated surgically when the patient's condition permits. Pneumonitis may develop as the result of severe chest injuries, and the speaker advocated the use of 10,000 units of polyvalent-anaerobic serum as a safeguard against anaerobic infection plus the use of 3,000 units of tetanus antitoxin.

All individuals involved in accidents must be watched carefully for symptoms of abdominal injuries since these may not appear for two hours and may be delayed from six to eight hours in those suffering from alcoholism. Pain and shock, or vomiting, are not always present early, and the presence or absence of liver dullness is not reliable. The respiratory movement of the abdomen may be restricted. Two most helpful measures in diagnosing abdominal injuries are: x-ray which will reveal air under the diaphragm when a hollow viscus is ruptured; second, the instillation of sodium iodid into the bladder, which will reveal bladder injury. Marked renal bleeding may be detected by x-ray films, which often reveal obliteration of the psoas muscle on the affected side. Hemorrhage cannot always be diagnosed by laboratory means since blood dilution does not often occur until the patient has reacted from shock and dehydration. Tears of the liver may be treated by simple suturing or packing. Lacerations of the spleen may require splenectomy.

Dr. Garnett Cheney of San Francisco was asked by Doctor Butler to discuss the blood changes that occurred after splenectomy following injury to that organ. He stated that there is increase in the platelets and leukocytes, and drop in the red blood cells, accounting for the anemia that occurs. The inhibitory factor of the bone marrow upon platelets and leukocytes is lost, the hemoglobin falls more than the red blood cells because of removal of iron pigment, and the endothelial cells are removed, thus tending to prevent the body from putting iron in the red blood cells in pigment form. It takes months after splenectomy for the lymph glands, liver, and bone marrow to compensate for the loss of the endothelial cells. These patients should be given large doses of iron after splenectomy since it will help to correct the anemia.

Doctor Butler's paper was discussed by Doctors Woolsey, Beach, and Topping.

The application of Doctor Soracco for membership in the Society was read for the first time.

The report of the Board of Directors was read for the meetings of July, August, and September. Doctor Hale called the secretary's attention to an omission in the reading of the minutes of the July Board of Directors meeting.

A letter from Dr. Rulon S. Tillotson was read.

NORRIS R. JONES, *Secretary.*

SAN BERNARDINO COUNTY

The annual meeting of the San Bernardino County Medical Society was held at the California Hotel, San Bernardino, on Tuesday, October 6. About sixty-five members and guests were present. Dinner was served at 7 p.m. The meeting was opened by the president at 8 p.m.

Election of officers:

It was moved and seconded that the Society be instructed to cast a unanimous ballot for the following officers: D. C. Mock, president; Frank Pritchard, first vice-president; W. E. Macpherson, second vice-president; and A. E. Varden, secretary-treasurer.

Passed and so ordered.

Information has just been received that Doctor Macpherson has moved to Los Angeles and has applied for transfer to the Los Angeles County Medical Society. This vacancy in the office of second vice-president is to be filled by the Board of Directors at their next meeting.

The secretary-treasurer then gave the financial report as approved by the Council.

Dr. V. M. Pinkley explained that physicians doing office work for the county on a part-pay plan will be legally liable to attend these patients in the home, and quoted his authority for the statement. The Advisory Board invited an expression from the Society before starting the plan. The fund set aside for the purpose might be transferred to the depleting obstetrical fund if not used for office work.

After further discussion Dr. P. M. Savage, Jr., moved that the Society recommend to the Advisory Board that the fund for office work be transferred to the obstetrical fund. Seconded and carried.

The following new members were voted on and approved: Doctors Emmett Forde Kesling of Trona, Ernest Cadwell of Fontana, Francis L. Crowley of Patton, Theophilus Fleming Ford of Ontario, Frances Franklin of Ontario, and Joseph M. Swindt of Chino by transfer.

The program of the evening was then given as follows:

Pioneers of Medicine in the San Bernardino Valley.

T. M. Blythe, M. D., of Redlands, 1891.

Marie A. Bennette, M. D., of San Bernardino, 1885.

Joseph A. Champion, M. D., of Colton, 1898.

John N. Baylis, M. D., of San Bernardino, 1888.

William A. George, M. D., of Loma Linda, 1911 .

These talks by the pioneers were most interesting and entertaining. Unfortunately, Doctor Evans of Highland was unable to be present.

After a short talk by our councilor, Dr. C. L. Emmons, the meeting adjourned at 10 p. m.

A. E. Varden, *Secretary.*

SAN JOAQUIN COUNTY

The regular meeting of the San Joaquin County Medical Society was held in the Medico-Dental clubroom in Stockton. The meeting was called to order at 8:25 p. m., Dr. T. C. O'Connor presiding.

The regular meeting was preceded by the customary supper meeting at the Hotel Wolf, at which nineteen members and guests were present. Dr. Dewey Powell spoke on *European Impressions,* and particularly emphasized the splendid equipment of the *Queen Mary.*

The petitions of Drs. R. A. Greenman and Daniel Beltz for membership in the San Joaquin County Medical Society were passed on favorably by the Admissions Committee. There being no objections from the floor they were declared members.

Dr. A. L. Van Meter, as chairman of the Committee on the Postgraduate Study, announced the opening of a new session in this study and urged all members to participate in this undertaking.

The paper of the evening was presented by Doctor Laurence Taussig, associate professor of dermatology, University of California, who gave a talk, illustrated by lantern slides, on *Common Skin Diseases and Their Treatment.* The paper dealt mainly with the pustular infections, with special emphasis on impetigo. The paper caused considerable discussion from the floor.

There being no further business to come before the Society, the meeting was adjourned at 9:45 p. m. and refreshments were served.

G. H. Rohrbacher, *Secretary.*

TULARE COUNTY

The Tulare County Medical Society held its first fall meeting on Sunday, September 6, at Motley's Café in Visalia at 6:30 p. m., preceded by dinner.

Following the schedule approved for "Order of Business" in the recently voted by-laws, the educational program was presented first.

Dr. J. C. McClure, president, presided and introduced Dr. T. L. Althausen, associate professor of medicine at the University of California. Doctor Althausen read a paper on *Recent Advances in Diagnosis and Treatment of Gall-Bladder Disease.*

He stressed particularly the newer physiologic concept of the biliary-hepatic system, and with this background discussed the various disturbances of gall-bladder function and also the treatment of choliocystic disease.

A round-table of discussion followed his paper which was thoroughly appreciated by those present.

In routine business session the accumulated correspondence of the past summer was summarized for the members. The new code of disciplinary procedures was read and is to be added to our by-laws by vote at our next regular meeting.

The question of postgraduate courses was referred to the committee for discussion at the next meeting.

Karl F. Weiss, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (21)

Los Angeles County.—Carl Erich Ebert.

Marin County.—Edward V. Knapp.

Orange County.—Burr J. Van Doren.

Riverside County.—Omer W. Wheeler.

Sacramento County.—Charles V. Soracco.

San Diego County. — Parker Hollingsworth, Henry Marcus Young.

San Francisco County.—Leonard G. Dobson, Max Fine, Morris R. Gordon, Arthur Haim, Edward Lee Harrington, Harold H. Lindner, Walter W. Port, David A. Rytand.

San Joaquin County. — Daniel Beltz, Robert Alvin Greenman, Henry C. Rixford.

San Luis Obispo County.—Edison A. French.

Santa Barbara County.—Harold Kahn.

Ventura County.—Harold S. Foskett.

Transferred (2)

Eric Liljencrantz, from Alameda County to San Francisco County.

Joseph Swindt, from San Francisco County to San Bernardino County.

In Memoriam

Allen, John. Died at Raymond, October 4, 1936, age 70. Graduate of Georgetown University School of Medicine, Washington, D. C., 1908. Licensed in California in 1914. Doctor Allen was a member of the Fresno County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Beattie, Hugh. Died at Elk Grove, September 18, 1936, age 70. Graduate of Cooper Medical College, San Francisco, 1896, and licensed in California the same year. Doctor Beattie was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and the American Medical Association.

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Langnecker, Harry Leslie. Died at Palo Alto September 23, 1936, age 58. Graduate of Johns Hopkins University School of Medicine, Baltimore, 1906. Licensed in

California in 1915. Doctor Langnecker was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Liliencrantz, August. Died at Oakland, October 9, 1936, age 89. Graduate of Rush Medical College University of Chicago, 1870. Licensed in California in 1882. Doctor Liliencrantz was an honorary member of the Alameda County Medical Association, the California Medical Association, and the American Medical Association.

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Newman, Henry Parker. Died at San Diego, September 23, 1936, age 83. Graduate of the Detroit Medical College, 1878. Licensed in California in 1908. Doctor Newman was a retired member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Offield, Archibald Leonard. Died at Burlingame, September 17, 1936, age 59. Graduate of Cooper Medical College, San Francisco, 1905, and licensed in California the same year. Doctor Offield was a member of the San Mateo County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Thieme, Derk Anthony I. Died at Los Angeles, October 5, 1936, age 54. Graduate of the University of Southern California School of Medicine, Los Angeles, 1905, and licensed in California the same year. Doctor Thieme was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION[†]

MRS. ANDREW J. THORNTON..............................President
MRS. ROBERT M. FURLONG..Editor

Notes From the National Organization

It is the purpose of the Woman's Auxiliary to the American Medical Association to promote health education, and it is the purpose of the Committee on Health Education and Program to promulgate and assist the state and county auxiliaries in their programs. A more sympathetic and broader knowledge is necessary to obtain the best results.

From the recommendations to the Woman's Auxiliary to the American Medical Association by Mrs. V. E. Holcombe, National Chairman of Health and Program, Charleston, West Virginia, the following excerpts are taken:

The aims of the Woman's Auxiliary should be kept before the auxiliaries, and the responsibility of each state and county chairman shall be to work out a health program which is approved by her Advisory Council, which will meet the needs of her respective state and county.

The American Medical Association Radio Broadcasts.—Plans are under way by the American Medical Association for broadcasting programs on health topics during the winter months. Doctor Bauer has requested that the Auxiliary continue in building up a listening audience throughout the coming year. Announcements will be sent to you from time to time concerning these splendid programs.

Collection of *Hygeia* clippings are available for borrowing; these clippings may be kept ten days, and the borrower must pay return postage. Doctor Bauer writes: "Clipping loan collections are for the lay individual who wishes to write a paper or make a talk on health to lay audiences." Loan collections are available on the following subjects:

330.1	Anesthesia
92.1	Anemia
346.1	Animal Experimentation
318.1	Athletics
124.3	Boys
184.1	Constipation and Cathartics
47.1	Communicable Diseases in the Home
121.1	Deafness
124.1	Delinquent Child
74.1	Diabetes
10.1	Diphtheria
322.1	Doctor
322.1	Doctor Bills
322.1	Doctor, Country
120.1	Eyes, Children's
327.1	Family Medicine Chest, The
349	First Aid
331.1	Flies
302.7	Food Poisoning
302.7	Food, Protection of
180.1	Gall-Bladder
81.1	Goiter
35.1	Gonorrhea
236	Hair
305.1	Hay Fever
319.1	Health Examinations
319.2	Health Examinations of Children
150.1	Heart Disease (With Outline)
40.1	Hookworm
348.1	Industrial Health
331.1	Insect Pests, Ridding the Household
331.1	Insect—Some Miscellaneous Diseases
194.1	Kidneys
33.1	Leprosy
335.1	Lighting
408.1	May Day
338.1	Medical Advances, Outstanding
124.2	Mental Hygiene—Child
122.1	Mental Hygiene—Adult
337.1	Milk
38.1	Mosquito
61	Cancer
51.1	Cancer of Digestive Organs
54.1	Cancer in Women
402.1	Child Health of the School (With Outline)
151.4	Colds
238.2	Nails, Finger
73.1	Obesity
261.1	Old Age
20.1	Pets
318.1	Physical Education
338.1	Pioneers of Medicine
320.1	Play, Leisure and Recreation
154.1	Pneumonia
228.1	Posture
338	Progress in Preventive Medicine
335.1	Radium
14.1	Rats
318.1	Recreation and Exercise
233.1	Ringworm
72.1	Rheumatism
238.9	Scabies
8.1	Scarlet Fever
401.1	School Health
422	Sex Education
315.1	Sunshine
331.1	Superstitions
34.1	Syphilis
238	Skin
42.1	Tapeworms
318.2	Training for Athletics and Health
172.2	Teeth
171	Tonsils and Adenoids
23.1	Tuberculosis—Tuberculosis in Childhood
23.1	Tuberculous Physicians
320.1	Vacations
316.1	Ventilation
302.8	Vegetarianism
21.1	Vincent's Infections
9.1	Whooping Cough
42.1	Worms
335.1	X-Ray

[†] As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Robert M. Furlong, chairman of the Publicity and Publications Committee, Linden Lane, San Rafael. Brief reports of county auxiliary meetings will be welcomed by Mrs. Furlong and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

"Reference for Papers on Outstanding Women" in medicine may also be had for those who wish to write papers or to make a study on this subject.

Your national chairman has in her files a complete list of references on many subjects for those who are doing intensive study on any of these subjects and will be glad to send reference material upon requests on the following subjects.

These lists have been furnished by the Bureau of Health and Public Instruction of the American Medical Association.

Subjects for Study:

Adolescence
Alcohol
Allergy
Amebic Dysentery
Books Containing a Discussion of Anesthesia
Bacteriology
Doctor and Medical Practice
Deafness
There's a Doctor in the Story
Diabetes, Birth Control
Biology
Diet-Food-Nutrition
Child Guidance
Birth Injury
Climate
Hygiene
Industrial
The Preschool Child
Contagious Diseases
The Common Cold
Diseases of Children
Height, Weight
Age Tables for Children
Heart Disease
Heart
Books on Personal Health
Nostrums and Quackery
For Assistant in Doctor's Office
Home Care of the Sick
Cancer
Medical History and Progress
Eugenic Sterilization
General Health
Materia Medica and Therapeutics
Heredity
Prenatal Care
Stammering
Stuttering
Conservation of Eyesight
Textbooks on Pediatrics.
Feet
Sex—Adult
Marriage
Infant Care and Hygiene
Massage
Parents and Teachers
Speech Defects
Mental Hygiene
Psychotherapy
General Bibliography for Mothers
Menstruation
Menopause
Sex-Textbooks
The Nervous Child
Communicable Diseases
Narcotics
Old Age
Middle Age
Physical Education
Corrective Exercise
First Aid
Use of Mercurochrome Intravenously
Tobacco, General
Surgical Technique for Nurses
Hydrotherapy
Tuberculosis
Physical Therapy
Weight
Medical Dictionaries
Nervous and Mental Diseases
Goiter
Light
Teachers
Health of Teachers
Obesity in Children
Underweight and Nutrition
Obstetrical Nursing
Bibliography for Nurses
Laboratory Techniques and Procedures

County Auxiliary Reports

Los Angeles County.—The first fall meeting of the Woman's Auxiliary to the Los Angeles County Medical Association was held on Tuesday, September 22, at the County Medical building, with the new president, Mrs. Clifford Andrews Wright, presiding. The 118 members attending were served a delightful buffet luncheon at tables bright with autumn blooms, arranged by the new Flower Committee.

An announcement was made that the class in parliamentary law will be resumed next month. Resolutions, presented by Mrs. James F. Percy, on the death of Dr. William Duffield, a former president of the Los Angeles County Medical Association, were adopted.

Three-minute talks on pending legislation were given by Dr. William Daniels and by Mr. Ben Read.

The chief speaker of the program was Dr. Frank Davis of the department of psychology at the University of California at Los Angeles, who gave a very interesting outline of the psychologic significance of dreams.

* * *

The State Board of the Woman's Auxiliary to the California Medical Association met at the Casa Del Mar Club in Santa Monica on August 11, at which time the members of the Los Angeles auxiliary were asked to meet the state president, Mrs. Thornton, and the members of the State Board at luncheon.

The luncheon tables were attractively arranged with vivid centerpieces, and each place was marked with a small corsage.

Swimming and bridge were offered for relaxation between meetings.

* * *

The Los Angeles auxiliary announces with deep regret the untimely death of Mrs. Charles S. Young of Glendale on August 6.

⁂

Marin County.—The Woman's Auxiliary to the Marin County Medical Society held its first fall meeting of the year on Thursday evening, September 24, at the Marin Golf and Country Club, San Rafael. There were twenty-seven present, two of whom were guests.

The officers of the Marin County auxiliary for the coming year are: Mrs. Harry Hund of San Rafael, president; Mrs. Thomas Gocher of Fairfax, vice-president; Mrs. Roy R. Robertson of Sausalito, secretary; Mrs. A. Miller of San Rafael, treasurer.

After dinner the meeting was called to order by the new president, who gave a brief outline of her plans and aims for the year. Interest and enthusiasm was shown by the members present.

Following the usual reports and business transactions, Mrs. Hund appointed her committees for the year, to be headed by the following chairmen: Memberships and Organization, Mrs. Thomas Gocher of Fairfax; Program and Health, Mrs. Lloyd Tyler of San Rafael; Public Relations, Mrs. W. P. Goddard of Mill Valley; Publicity, Mrs. Roy R. Robertson of Sausalito; Entertainment, Mrs. M. E. Hazeltine of San Rafael; Transportation, Mrs. W. S. Polland of San Rafael; Historian, Mrs. Frank Cannon of San Rafael; *Hygeia,* Mrs. Thomas Gocher of Fairfax.

Mrs. Robert M. Furlong was presented with a gift as a token of appreciation for her services in the capacity of president for the past year.

The guest speaker of the evening was Mrs. Helene Hjort, who gave a most interesting and lucid picture of Java and life in the Dutch East Indies.

⁂

Orange County.—More than twenty-five members of the Woman's Auxiliary to the Orange County Medical Association met yesterday for the first time this fall at the home of Mrs. Harry G. Huffman, 2340 Riverside Drive.

The Huffman home was beautifully decorated with dahlias of all varieties, sent from the famous dahlia gardens of Dr. and Mrs. G. Emmett Raitt.

Mrs. K. H. Sutherland, new president of the group, conducted a short business meeting, at which she introduced her new fellow officers, including Mrs. D. C. Cowles of Fullerton, vice-president; Mrs. L. E. Wilson of Santa Ana, treasurer; and Mrs. G. E. Raitt of Santa Ana, secretary.

Mrs. E. H. Kirsten of Anaheim, Program Chairman, introduced Mr. Ben Read, executive secretary of the Public Health League, who discussed pending legislation. Miss Kate Rea of Anaheim, southern district chairman of education of the Federated Women's clubs, also spoke briefly on proposed amendments.

Other prominent guests introduced to the doctors' wives included a group of San Diego women, all medical auxiliary officials. They were: Mrs. A. J. Thornton, state president; Mrs. W. H. Newman, state corresponding secretary; Mrs. T. J. Lindemulder, president of the San Diego auxiliary; and Mrs. C. E. Howard, past president of the San Diego auxiliary.

At the conclusion of the afternoon's program, Mrs. Huffman served a delicious tea course, with the assistance of her co-hostesses, Mrs. Dexter Ball, Mrs. R. C. Harris, Mrs. K. H. Sutherland, and Mrs. G. E. Raitt.

⁂

Santa Clara County.—The Board of Directors met previous to the regular meeting to (*a*) pay bills; (*b*) elect a new corresponding secretary; (*c*) fill a vacancy on the board, one member resigning; (*d*) hear the report of the chairman of the Auditing Committee.

The regular meeting was a luncheon held at the San Jose Country Club, forty-two members being present.

After routine business was disposed of, Mrs. Shepherd gave a report of the State Board meeting held in Santa Monica in September.

The guest speaker of the day was Mrs. William P. Butler who spoke on *Impressions of Moden Medical Literature.*

MRS. CHARLES MOORE, *Secretary.*

Six in Operations Case Sentenced*

Six of eleven persons recently convicted as members of a Coast illegal operations ring today were under sentence of from four to twenty-five years in San Quentin prison.

The sentences of the other five were not fixed by Superior Judge Arthur Crum, who yesterday granted them permission to file applications for probation and set a hearing for November 16.

The six who were given prison terms also asked probation, but their pleas were denied by Judge Crum. Those sentenced were Dr. George Watts, 10 to 25 years; Dr. Jesse C. Ross, 10 to 25 years; Dr. Valentine St. John, 4 to 10 years; Dr. James Beggs, 10 to 25 years; R. L. Ranklin, 10 to 25 years, and William Byrne, 10 to 25 years.

All except Dr. St. John had been convicted on five counts, while he was found guilty on two counts. Each of the counts called for a penalty of from two to five years, and in all cases Judge Crum ruled that they must be served consecutively. Notices of appeal were filed by all six sentenced men.

Those granted permission to apply for probation were J. O. Shinn, John Creeth, Grace Moore, a nurse; Lillian Wilson and Violet Pelligrini.

Trials of the eleven persons lasted four weeks, and resulted from a series of raids in San Francisco, Oakland, San Jose, Los Angeles, Hollywood, Long Beach, and San Diego offices of the asserted syndicate.—Los Angeles *Herald-Express*, November 3, 1936.

In spite of all our advances in medical knowledge, it is still true that it is more important to know what sort of patient has a disease than what sort of disease a patient has.—James J. Walsh.

Bequest Forms: Unto the California Medical Association*

FORM OF CLAUSE OF WILL PROVIDING FOR CASH BEQUEST

I hereby give and bequeath unto Trustees Of The California Medical Association, a nonprofit corporation of California, the sum of $——— to be known as the ——— Gift, to be used and expended by said corporation for scientific, educational, or hospital purposes.

* * *

FORM OF CLAUSE OF WILL PROVIDING FOR CASH BEQUEST

I give and bequeath unto Trustees Of The California Medical Association, a nonprofit corporation of California, the sum of $———, to be held as a fund, to be known as the [here insert name desired] Fund, the principal whereof shall from time to time be invested to the best advantage compatible with safety, and the income whereof shall be used and applied for scientific, educational, or hospital purposes.

* * *

FORM OF CLAUSE OF WILL PROVIDING FOR BEQUEST OF PERSONAL PROPERTY

I give and bequeath unto Trustees Of The California Medical Association, a nonprofit corporation of California [here describe the property], the same, or the proceeds thereof, to be held as a perpetual fund, to be known as the [here insert name desired] Fund, the income whereof shall be used and applied for scientific, educational, or hospital purposes. The said corporation shall have the power to sell said property and to invest and reimburse the proceeds arising from the sale thereof from time to time as it may deem advisable for the purpose of producing as large an income as may be compatible with safety.

* * *

FORM OF CLAUSE OF WILL PROVIDING FOR DEVISE OF REAL PROPERTY

I give and devise unto Trustees Of The California Medical Association, a nonprofit corporation of California, to aid and further its scientific, educational, and hospital purposes, and to be known as the ——— Gift, the following described real property situate in the County of ———, State of California, and more particularly described as follows, to wit:

* * *

FORM OF CLAUSE OF WILL PROVIDING FOR DEVISE OF REAL PROPERTY

I give and devise unto Trustees Of The California Medical Association, a nonprofit corporation of California [here describe the property], the same, or the proceeds thereof, to be held as a perpetual fund, to be known as the [here insert name desired] Fund, the income whereof shall be used for and applied to the support and maintenance of scientific, educational, or hospital purposes. The said corporation shall have the power to sell said property and to invest and reinvest the proceeds arising from the sale thereof from time to time as it may deem advisable for the purpose of producing as large an income as may be compatible with safety.

The key to the world of the future and to the wise fraternity of all races lies in the liberation of the child from the bondage of others' error and sin; from disease and debility, from desertion and want, from ignorance and passion above all, that are visited on the helpless to the third and fourth generation. The heart of a child is friendly to all; like the baby of Della Robbia, its limbs are bound, but its arms go out to its fellows. Its single claim is to be allowed to love; its one revenge to die if, for an hour, we neglect it.—Romain Rolland.

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*Editorial comment is made on page 380; other news items concerning the trial are given on page 448, in State Medical Board column.

* These Bequest Forms were discussed editorially in CALIFORNIA AND WESTERN MEDICINE, for March, 1936, p. 145, and June, 1936, p. 460.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Atlantic City, New Jersey, June 7-11, 1937. Olin West, M. D., 535 North Dearborn Street, Chicago, secretary.

California Medical Association, Del Monte, May 2-5, 1937. F. C. Warnshuis, M. D., 450 Sutter Street, San Francisco, secretary.

* * *

National Society for the Prevention of Blindness, Columbus, Ohio, December 3-5, 1936. Mr. Lewis H. Carris, 50 West Fiftieth Street, New York, managing director.

Southwestern Medical Association, El Paso, Texas, November 19-21, 1936. Orville E. Egbert, M. D., 116 Mills Street, El Paso, secretary.

Medical Broadcasts*

American Medical Association

The American Medical Association and the National Broadcasting Company present the second series of dramatized health broadcasts under the title "Your Health," beginning October 13. The first broadcast in the new series will be the thirty-second dramatized coöperative broadcast. The theme for 1936-1937 will differ slightly from the topic in the first series, which was "Medical Emergencies and How They Are Met." The new series will be built around the central idea that "one hundred thousand American physicians in great cities and tiny villages, who are members of the American Medical Association and of county and state medical societies, stand ready, day and night, to serve the American people in sickness and in health."

The program will be on the Red network and Pacific network of the National Broadcasting Company. The stations listed below are those on the Pacific Coast to which the program is available:

KPO—San Francisco
KFI—Los Angeles
KGW—Portland, Oregon
KOMO—Seattle, Washington
KHQ—Spokane, Washington

It should be noted that a station may take the program or not. If a station included in the list is not broadcasting the program "Your Health," it is possible that the management may be induced to broadcast the program if it receives evidences of local interest. The Committee on Education or other appropriate committee of the county medical society might take this matter up with the station management and tender coöperation in giving the program local publicity.

The time of the broadcast is Tuesday afternoon, two o'clock, Pacific time.

* * *

San Francisco County Medical Society

A radio broadcast program for the San Francisco County Medical Society for the month of November is as follows:

Tuesday, November 3—KYA, 6 p. m.
Tuesday, November 10—KYA, 6 p. m.
Tuesday, November 17—KYA, 6 p. m.
Tuesday, November 24—KYA, 6 p. m.

Los Angeles County Medical Association

The radio broadcast program for the Los Angeles County Medical Association for the month of November is as follows:

Tuesday, November 3—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, November 7—KFI, 9 a. m. Subject: The Road of Health.
Saturday, November 7—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, November 10—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, November 14—KFI, 9 a. m. Subject: The Road of Health.
Saturday, November 14—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, November 17—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, November 21—KFI, 9 a. m. Subject: The Road of Health.
Saturday, November 21—KFAC, 10:15 a.m. Subject: Your Doctor and You.
Tuesday, November 24—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, November 28—KFI, 9 a. m. Subject: The Road of Health.
Saturday, November 28—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Lane Lectures of 1936.—Stanford University is pleased to announce that the twenty-sixth course of Lane Lectures will be given by Dr. Eugene F. DuBois on April 5 to 9, 1937. The general title for the series of lectures will be "Mechanism of Heat Loss and Temperature Regulation."

Doctor DuBois is professor of Medicine at Cornell Medical College and medical director of the Russell Sage Institute, and is an experienced scientist in pathological physiology as well as in clinical medicine.

International Labor Office: Handbook on Industrial Medicine.—The large number of requests for information in the field of industrial medicine which have been received in recent years by the International Labor Office of Geneva, Switzerland, have resulted in publication by the Office of a handbook, or vade-mecum, designed specially for the use of physicians and others interested in that field.

The handbook contains a detailed report on the methods of investigation that medicine derives from other sciences—particularly from physics and chemistry—for the purpose of checking or testing atmospheric pressure, temperature, humidity, ventilation, lighting conditions, the quantity and nature of dusts and harmful gases and fumes, etc., in working premises.

Each chapter has been prepared by a recognized expert, and these experts have made a point of including methods and apparatus in different countries, while, however, selecting for presentation only such as, in their opinion, are most currently adopted or more generally recognized as best.

The main object in the preparation of the handbook was not to produce a learned "treatise" setting forth and criticizing theories and providing a voluminous bibliography, but merely to give practical information in an essentially concise form, without sacrificing clarity, so that the work might reach the largest possible public.

Produced in pocket-form, the handbook, containing some 330 pages, can be easily carried about the factory, workshop, etc., by any person whose task it is to ascertain that the hygienic conditions are satisfactory. The novice, as well as the trained observer, will find in it information calculated to assist him in his researches. The numerous diagrams and tables in the manual also should prove of value.

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* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Dr. Roy W. Hammack.—Roy W. Hammack, M. D., of Los Angeles recently became associated with Don Baxter (Incorporated) as medical adviser.

The Southern California Medical Association.—The semi-annual meeting was held at the Los Angeles County Medical Association headquarters, 1925 Wilshire Boulevard, Los Angeles, on October 30 and 31. The guest speaker was Dr. Elliott P. Joslin of Harvard Medical School.

Heart Disease in San Francisco Is Subject of Study. While the incidence of rheumatic heart disease treated by private practice in San Francisco is approximately the same as in the large eastern centers, it is definitely lower in clinic practice than is the case in these same eastern centers. Another point in San Francisco's favor is that many of the cases treated migrated to the bay region because of hoped for beneficial results from the milder and more equitable climate of this region.

These facts are set forth in an extended study of heart disease statistics in San Francisco by Dr. J. C. Geiger, San Francisco health officer; Dr. J. J. Sampson, assistant clinical professor of medicine, University of California Medical School; Dr. Roslyn C. Miller and Dr. J. P. Gray. The outpatient clinics of the University constituted one of the chief sources of the study, which also included a city-wide survey.

The study is reviewed in the current issue of the *American Heart Journal.*

The relatively low incidence of clinical cases of rheumatic heart disease in San Francisco is attributed to "better living conditions in poorer homes" than may be found in the other cities mentioned in the survey.

Symposium on Heart Disease.—The Heart Committee of the San Francisco County Medical Society will hold its seventh annual postgraduate symposium on heart disease on November 18 and 19, 1936.

The program includes the following:

WEDNESDAY, NOVEMBER 18

Morning Session—San Francisco Hospital
J. Marion Read, M. D., presiding

Presentation of patients with cardiovascular disease—subacute bacterial endocarditis, aneurysm, etc.

Afternoon Session—Stanford University Hospital
William W. Newman, M. D., presiding
Dr. William W. Newman presiding

Atypical Features of Coronary Occlusion. Illustrative Cases—Arthur Bloomfield, M. D.

Surgical Treatment of Hypertension—Emile Holman, M.D., and David A. Rytand, M. D.

Some Cases Erroneously Treated for Coronary Artery Disease—William Dock, M. D.

The Value of the Blood Sedimentation Rate as an Aid to the Diagnosis and Treatment of Coronary Occlusion—Henry Gibbons, III, M. D.

Management of Chronic Auricular Fibrillation. Illustrative cases—J. K. Lewis, M. D.

Evening Session—University of California Hospital
William J. Kerr, M. D., presiding

Round-Table Discussion (program in preparation).

THURSDAY, NOVEMBER 19

Morning Session—University of California Hospital
William J. Kerr, M. D., presiding

Clinics and Lectures (program in preparation).

Afternoon Session—San Francisco Hospital
Gordon E. Hein, M. D., presiding

Clinical pathological conference and demonstration of electrocardiograms.

Evening Session—San Francisco County Medical Society
J. Marion Read, M. D., presiding

Annual meeting of the San Francisco Heart Committee. Dr. John C. Ruddock of Los Angeles, President of the California Heart Association, will be the guest speaker and will give an illustrated lecture. Dr. Eugene S. Kilgore will discuss the cardiac cripple in industry.

Programs will be mailed on request as soon as completed. All those desiring to register for the course, please notify the secretary, Dr. William Dock, 604 Mission Street, Room 802, San Francisco. The registration fee is $2 for the entire course, which also entitles the registrant to membership in the newly organized California Heart Association.

Soft Foods Will Develop Race of Facial Weaklings. The public is conscious of the great achievements of science, but eagerly and innocently accepts the pseudoscientific statements blazoned forth in advertisements of nostrums and cure-alls. Unfortunately, both medical and dental practitioners, in some instances, have lent their names, sometimes inadvertently, but usually for gain, to this class of propaganda.

These statements are made in a paper on the professional relationship of the medical doctor and the dentist, written by Dr. William J. Kerr, head of the department of medicine of the University of California Medical School, and published in the current issue of *Annals of Internal Medicine.* The publication is the official organ of the American College of Physicians.

In his article Doctor Kerr stated that the modern tendency to use prepared and predigested foods is no doubt giving rise to faulty development of the face, jaws, and teeth through lack of use. "The pap which is served us from the cradle to the grave will make of us a race of facial weaklings," he said. "Infants should have something to masticate as soon as they have the tools to do so and probably require something firmer than milk to aid in the proper development of jaws and teeth.

"The heavy metals entering the body by accident or intent as therapeutic agents are frequently causes of destructive lesions in the supporting structures of the teeth. Mercury is notorious for its action in causing salivation and the loosening of the teeth. Lead, bismuth, and copper likewise cause local damage. Radium and other radioactive substances are dangerous to the bones of the jaw and other local tissues. Arsenic, when applied locally, may cause necrosis of local structures. Iron is frequently used in the treatment of anemia, and it is well known that loss and discoloration of teeth may result."

Tests Show New Insulin Compound Better Than Old.—A new insulin compound, developed by Danish scientists, with indicated advantages over the usual insulin from the standpoint of both dosage amount and absorption, has been tried on a group of diabetic children at the University of California Hospital here "with most encouraging results." The compound is a combination of the usual insulin with a protamin, a substance derived from the sperm of a species of trout (Salmo iridus).

"While still too early to give final pronouncement regarding protamin-insulinate, experience thus far with six children of the pediatric department at the University of California Hospital is most encouraging," the report from the hospital states. "It would seem to be of the greatest value in those children whose diabetes necessitates three or four injections of insulin in twenty-four hours, for it is found that injections can be cut down to not more than two in twenty-four hours, with maintenance of a blood sugar much nearer normal and subject to less fluctuation (neither too high nor too low) than with the four injections of the old insulin.

"In addition, there is more economy and less wastage of insulin, such that the total unit amount of insulin is materially reduced, averaging a little more than half the previous dosage. Considering the reduction in the number of injections which must be given aseptically, this reduces both the dread of the needle and the danger of infection—items of particular importance to the young patient. The cost item may likewise prove less if sources of protamin are not too costly, since there is the reduced amount of insulin." . . .

However, extreme caution is imposed on both diabetes sufferers and administering physicians, it being emphasized by the department that the treatment is still in the experimental stage. "Great care must be exercised in switching to or in starting the new insulin," the report said. "The danger of immediate substitution may lead to too low a blood sugar. So far the best results are obtained when a mixture of old and new insulin are used and the dosage finally fixed after four to ten days' observation and trial. It would seem logical that some insulin for immediate use (the old insulin), with some for slow absorption and gradual use would be the best treatment so long as the hormone product must be given by periodic injection."

Dean Chandler Gives Opening Lecture at University of Southern California.—The "Opening Lecture" of the School of Medicine of the University of Southern California was given on Thursday, October 15, at 11 a. m. in the auditorium (main floor), Los Angeles County Hospital. The lecture was given by Dr. Loren Roscoe Chandler, Dean of the School of Medicine, Stanford University. A large audience of attending staff and other physicians was present.

Ring Robs Blind: United States Seizes Thirty Fake Eye Surgeons.—Universal News Service prints the following:

"Dealing a smashing blow at what they described as 'the most vicious band of racketeers in the nation,' postal inspectors tonight had seized thirty fake eye surgeons and wrecked a five million dollar a year bogus medical business.

"The arrests, made quietly throughout the country over a period of more than a month, climaxed an investigation extending over a year. The names of those seized have been withheld by postal officials."

Nation-Wide Dope Drive. — The Treasury recently threw 2,500 narcotic agents and law enforcement officers into a nation-wide drive against narcotics and illicit liquor.

In scattered cities throughout the country Treasury agents were ordered to make a series of sudden raids in an effort to round up a large number of suspected law breakers.

Officials said several hundred arrests were expected to result from the raids which were ordered by Harold N. Graves, assistant to Secretary Morgenthau and coördinator for the Treasury's various law-enforcement agencies.

The activities were being centered in the fifty or more cities where various Treasury enforcement agencies maintain offices.

Ohio State Department of Health Exhibit at State Fair.—With the most diversified exhibit it has ever had at a State Fair and one of the best displays in its history, the State Department of Health, for all its vital importance to the people of Ohio and the magnitude and diversity of its educational program, found itself crowded into less space than it has had for years, in an obscure building off the main line of traffic. Nevertheless, a system of direction markers distributed over the Fair grounds led large crowds to its doors, and those in charge were busy from early morning until late at night presenting the various angles of public health work and administration to those who pay for it, answering their questions and demonstrating some of the most important features for their visual education.

Two outstanding features held greatest interest for the greatest number of visitors. One of these was "Contacts," a moving-picture "talkie" which demonstrated the course of tuberculosis from the contact infection through all the stages of diagnosis and treatment. It was the heart of an exhibit by the Bureau of Tuberculosis, of which Dr. W. J. Smith is chief. The film was loaned by the Franklin County Sanatorium.

The other was the demonstration of mine-sealing operations in the Ohio coal fields, under direction of Major C. S. Slade of the Division of Sanitary Engineering, whose artistry and mechanical genius made the exhibit possible. . . .

All the other divisions and most of the bureaus had individual exhibits, including Industrial Hygiene and Occupational Diseases, Child Hygiene, Dental Hygiene, Hospitals, Communicable Diseases, Venereal Diseases, Public Health Nursing, Health Organization and Education, Vital Statistics, Rural Sanitation, Sanitary Engineering, Laboratories, Administration and Publicity. Distribution of literature was through the nursing division, although several bureaus distributed considerable quantities of their special publications. Dr. Finley Van Orsdall, Chief, Division of Communicable Diseases, as for many years, had charge of the Red Cross first-aid service, assisted by Dr. P. L. Harris and Dr. C. C. Beal.

It was a great exhibit, deserving of a better location and larger space. What the Department really needs is a substantial and commodious building of its own.

American Board of Obstetrics and Gynecology.—The next written examinations and review of case histories of Group B applicants by the American Board of Obstetrics and Gynecology will be held in the various cities in the United States and Canada on Saturday, November 7, 1936, and on Saturday, March 6, 1937.

The next general examination for all candidates (Groups A and B) will be held in Atlantic City, New Jersey, on June 8 and 9, 1937.

Application blanks and booklets of information may be obtained from Dr. Paul Titus, Secretary, 1015, Highland Building, Pittsburgh (6), Pennsylvania. Applications for these examinations must be filed in the secretary's office not later than sixty days prior to the scheduled date of examination.

Dr. William Dock.—Dr. William Dock was appointed professor of pathology in the Stanford University School of Medicine on September 1. He received his B. S. from Washington University in 1920 and his M. D. from Rush Medical College in 1923. He served as medical house officer at the Peter Bent Brigham Hospital in Boston, was a graduate student in Vienna, and then resident in medicine at the Stanford University Hospital, San Francisco.

Since 1926 Doctor Dock has been a member of the department of medicine of the Stanford University School of Medicine. He has been active in research in the field of pathology and physiology of the heart, kidneys, and diseases of the blood.

Associated with Doctor Dock will be Dr. David A. Wood, associate professor of pathology, and Drs. James B. McNaught and Alvin J. Cox, assistant professors of pathology.

California Mental Hospital Opened in Ventura.—The Los Angeles *Examiner* of October 13 printed the following news item:

FIRST UNIT OF NEW MENTAL HOSPITAL OPENED

Fifteen Hundred Guests Hear of New Ideal in Treatment of Mentally Ill at Camarillo

Amid serene Ventura County hills, in a cluster of airy and cheerful buildings, 1500 persons yesterday learned of the new ideal in the treatment of the mentally infirm.

The 1500 were guests at the formal opening of the first unit of the State's seventh mental hospital, the magnificent institution at Camarillo near Oxnard, sixty miles north of Los Angeles.

The present group of buildings, constructed at an expense of $1,380,000, is but the first part of an institution which will cost $7,000,000, and which will be built as rapidly as the Legislature appropriates funds. It will remove between 6000 and 10,000 men and women patients from the overcrowded mental hospitals now existing.

Governor Frank F. Merriam was the principal speaker yesterday. He was surrounded at the microphone by many other state officials, officers of the Ventura and Oxnard Chambers of Commerce and other organizations of that locality, and delegates from Los Angeles, including Health Officer George Parrish, representing Mayor Frank L. Shaw.

Also on the platform was Adolfo Camarillo, descendant of the famous ranching family after whom the institution is named, and Dr. Thomas W. Hagerty, superintendent of the hospital.

After the speeches, in which the institution was hailed as potentially the finest in the United States, George B. McDougall, State Architect, and Harry Lutgens, Director of State Institutions, aided in exhibiting the unit to the visitors.

A ranch of 1648 acres is provided for the hospital, for which $424,217 has been appropriated to date.

Present construction includes the men's unit, which also houses the administration offices temporarily, and the laundry, service plants, boiler rooms, and sewage-disposal plant. The handsome Spanish-type main building is only partially completed, and when finished will surround a seven-acre plaza.

The next unit to be built, the home for women, will be similar in construction.

One hundred and sixty patients already are receiving care in the hospital.

LETTERS

Concerning support of Army Medical Library.

MEDICAL LIBRARY ASSOCIATION
2 EAST 103RD STREET
NEW YORK, N. Y.

September 25, 1936.

To the Editor:—The Medical Library Association at its annual meeting, June 22, 1936, passed a resolution recommending the appropriation of adequate funds for the Army Medical Library and its *Index-Catalogue*, a copy of which is attached. In order to secure the widest possible attention in medical circles, this resolution is being distributed in four ways:

1. By sending it direct to the President of the United States, and other government officials concerned (in January, 1937).
2. By publication in medical journals.
3. By sending it to our own members, with the request that they urge the organization of which they are a part, as well as all other local medical associations and institutions not members of our Association, to adopt similar resolutions to be sent to their local members of Congress, requesting their support of these measures.
4. By sending it to the secretaries of national and state medical societies, with the request that they urge similar action by their organization.

If it is in any way possible, we beg that you will publish this resolution in your journal, urging your readers to request their congressmen, upon the convening of the new Congress in January, 1937, to support these measures.

What is needed is to bring home to congressmen the fact that the whole medical profession of the country does benefit by this great library and its *Index-Catalogue*, and does want it to have this material. Letters from individual doctors to their congressmen would also carry weight. We hope and believe that a really concerted effort by the entire medical body will help to secure the desired funds for the Army Medical Library.

Very truly yours,
MEDICAL LIBRARY ASSOCIATION.

* * *

The resolution of the national Medical Library Association, recommending the appropriation of adequate funds for the maintenance and growth of the Army Medical Library's book collection and *Index-Catalogue*, follows:

The Medical Library Association, comprising two hundred of the medical libraries of the United States and Canada, assembled in its thirty-eighth annual session in St. Paul, June 22, 1936, notes with pleasure and pride the appearance of Volume 1 of the Fourth Series of the *Index-Catalogue* of the Library of the Surgeon-General's Office, United States Army (Army Medical Library). The Association records with satisfaction the abbreviations and changes in composition in this new volume, effecting a saving of 20 per cent in space with accompanying reduction in cost.

After a delay of three years, during which no volumes of this *Catalogue* were printed, the appearance of this first volume of the fourth series gives renewed assurance of the continuation of this publication, which, together with the Army Medical Library, is considered the outstanding contribution which our country and its Government have made to medical knowledge; and

WHEREAS, The value and usefulness of the *Index-Catalogue* is dependent upon the completeness of the files of medical publications contained in the Library of the Surgeon-General's Office—a public, national, medical library, the greatest in the world, serving in its present form of administration with satisfaction the medical profession and the medical libraries of our country; and

WHEREAS, In recent years the annual appropriation of the Congress has been wholly inadequate to provide sufficient funds to acquire the current medical books and periodicals issued throughout the world, so that they might be available for use throughout the country and for inclusion in the *Index-Catalogue*; therefore be it

Resolved, That the Medical Library Association urges the Congress to appropriate annually to the Library of the Surgeon-General's Office an adequate sum for current medical books and periodicals and for the purchase of back publications lost during those recent years when the amount granted was grossly inadequate, thus depreciating the completeness and usefulness of the Library's collection; and an additional sufficient sum annually, for as many years as may be required, in order to make for the greatest possible completeness of the collection and its *Catalogue*; and be it further

Resolved, That a sum be appropriated annually to defray the cost of printing regularly each year not less than one volume of the *Index-Catalogue*; and be it further

Resolved, That a copy of these resolutions be spread upon the minutes of the annual meeting of this Association and sent to the President of the United States, the presiding officer of both houses of Congress, the Secretary of War, the Surgeon-General of the Army, and to the national, state, and other medical periodicals with a request for publication, and to the members of this Association, urging the organization of which they are a part and all other medical associations and institutions to adopt similar resolutions to be sent to their local members of Congress requesting their support of these measures.

Concerning legal justification for an abortion.

(Copy)

STATE OF CALIFORNIA
LEGAL DEPARTMENT

San Francisco,
October 19, 1936.

Dear Doctor*:—Under date of October 12, 1936, you state as follows:

> I am writing you for a little legal advice as a member of the ——— County Medical Society and the California Medical Association. The case is as follows:
>
> A woman is pregnant and wishes an abortion done upon the following grounds: She has a brother who is mentally defective and two cousins that are mentally defective on her mother's side. Her husband has a brother that is mentally defective and there are also cousins on this side of the family that are mentally defective. This woman gave birth to a dead baby, prematurely, some time between the seventh and ninth month—her first pregnancy. Her second pregnancy yielded a boy who appears to be healthy. The third pregnancy produced a boy who is decidedly mentally and physically defective. There is possibly some syphilis in the family history, but this patient herself shows no evidence of syphilis.
>
> Now the question is whether the approximate 65 or 75 per cent of possibility that this pregnancy might produce a defective is sufficient legal reason for producing an abortion. I am willing to do the abortion if it is legal to do so. But, of course, would not for one minute do such a thing unless I have legal justification.
>
> I have talked with several doctors who themselves feel that it would be right to do an abortion in this case. Please let me know if there is anything in the law or court decisions upon this subject—one way or the other.

In reply, please be advised that the question asked by you concerns a private right of your own and not a public one. It should, hence, be referred to private counsel. Under the law it is the privilege and duty of this office to officially advise only certain state officers, boards, commissions and the various district attorneys throughout the State.

I may, however, informally state to you that Section 274 of the Penal Code, as amended in 1935, provides as follows:

> Every person who provides, supplies, or administers to any woman, or procures any woman to take any medicine, drug, or substance, or uses or employs any instrument or other means whatever, with intent thereby to procure the miscarriage of such woman, unless the same is necessary to preserve her life, is punishable by imprisonment in the State prison not less than two nor more than five years.

You will note that the only exception made in the defined offense is that the abortion be "necessary to preserve her (the woman's) life."

The necessity it has been held justifies the act. (*State* vs. *Fitzporter*, 93 Mo. 390, 6 S. W. 223.)

In *State* vs. *Rudman*, 136 Atl. 817, the Supreme Judicial Court of Maine recently interpreted a statute similar to our own, as follows:

> It is well known that occasion arises where, in the exercise of proper surgical advice and care, it becomes neces-

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* Name of physician addressed is omitted.

sary, in order to save the mother's life, to remove the unborn foetus. To such highly honorable and proper acts, in accord with the highest ethics of the medical profession, the dictates of humanity, and all legal precepts, the statute has, and can have, no application. But to the destruction of unborn life for reasons, whatever they may be, other than necessity to save the mother's life, the law is intended, we believe, to be an express and absolute prohibition.

Trusting this may be of some informal assistance, I am

Very truly yours,
U. S. WEBB, *Attorney-General.*
By LIONEL BROWNE, *Deputy.*

CC: Board of Medical Examiners,
State Annex Building,
San Francisco.

Concerning information on human genetics.

BUREAU OF HUMAN HEREDITY
115, GOWER STREET, LONDON, W. C. 1
ENGLAND

To the Editor: — My Council would be very much obliged if you would be good enough to insert the accompanying notice in your next issue; and either in two subsequent issues or in another two alternate issues.

The object of this Bureau is, in the first instance, to collect as complete a record as possible of current information on human genetics. The only practical method is by making our needs known widely through scientific and medical journals, and your courtesy in this matter would be greatly appreciated. As such a notice might easily be overlooked, some editors have suggested to us that repeat issues will be necessary.

Later on, when a considerable amount of material is already available, we should be glad to furnish you from time to time with notes on the more interesting and important material which may come in. I need hardly add that we are not proposing to put in insertions as paid advertisements as the existence of the Bureau is a matter of interest to all scientific and medical men concerned with man.

R. RUGGLES GATES, F. R. S., *Chairman.*

* * *

The object of the Bureau of Human Heredity, 115, Gower Street, London, W. C. 1, England, is collection on as wide a scale as possible of material dealing with human genetics. Later, the tasks of analysis of material and distribution of the information available will be added.

The Bureau is directed by a Council representing medical and scientific bodies in Great Britain. It is affiliated to the International Human Heredity Committee, which ensures coöperation in all areas where research is proceeding.

The Council would be grateful to receive all available material from institutions and individuals, furnishing well-authenticated data on the transmission of human traits whatever these may be. Pedigrees are particularly desired; twin studies and statistical researches are also relevant. As research workers and others who send in material may in some cases wish to retain the sole right of publication (or copyright), those who so desire are asked to accompany their material with a statement to that effect.

Material should be given with all available details in regard to source, diagnostic symptoms, and the name and address of the person or persons who vouch for accuracy. All such details will be regarded as strictly confidential.

Reprints of published work would be most acceptable. Further, many authors when publishing material may also have collected a number of pedigrees which they have been unable to reproduce in detail. It is the object of the Council that such records, by being included in the Clearing House, should not be lost.

Those wishing for a copy of the Standard International Pedigree Symbols may obtain one from the office.

Announcements in regard to the services undertaken by the Bureau will be published from time to time.

Concerning codification of Medical Practice Act.

Under the caption, "A New Legislative Problem: Possible Danger to California State Medical Practice Act," editorial comment was made in the October CALIFORNIA AND WESTERN MEDICINE (pages 305-307).

A copy of the issue was sent to statute reviser, Mr. Arthur McHenry, who has the codification in charge, and from him has been received the following interesting reply:

CALIFORNIA CODE COMMISSION
CREATED BY THE PROVISIONS OF CHAPTER 750
STATUTES 1929
OFFICE: 206 STATE CAPITOL, SACRAMENTO

Sacramento, California,
October 19, 1936.

George H. Kress, M. D.
Editor, California and Western Medicine
945 Roosevelt Building
727 West Seventh Street
Los Angeles, California

Dear Doctor Kress:

This is to thank you for sending us a copy of the October issue of CALIFORNIA AND WESTERN MEDICINE, containing an editorial discussing the tentative code revision of the State Medical Practice Act.

It was with interest that we read the editorial and comment concerning the work of the Code Commission. We realize that the Medical Practice Act is a complicated piece of legislation and that it is difficult at times to secure the exact meaning of its provisions without actively participating in its daily operation.

To secure this exact meaning is the objective of the California Code Commission, and we are quite anxious to coöperate with you and your associates who are experts in this field of legislation, to secure a draft of the code which will meet with your approval and not require litigation to establish the scope of its terms and the constitutionality of its operation.

We have found in respect to the drafting of other codes in the past that we were in accord in regard to many of the objections and criticisms that were received, and were able to adopt them in advance of the conferences, which thoroughly check the drafts, section by section. In this manner the points for discussion have usually been reduced to a material extent, the remaining issues clarified, and the conferences rendered more fruitful of concete results than might have been possible in the absence of a preliminary exchange of views.

As you are undoubtedly aware, the draft must have the approval of the representatives of your profession before it is submitted to the Legislature, and we will be glad to work with you towards this objective. It is our aim to submit this draft to a thorough and complete study, section by section, in order that the final result will produce a code that correctly and clearly states the existing law in a manner that is satisfactory to you.

A conference, or a series of conferences, may be held at any time and place that suits the convenience of the representatives of the medical profession, as we are preparing to devote as much time and study as is necessary to accomplish our objective in a manner that meets with their approval. We have written to Dr. Charles B. Pinkham, Secretary of the State Board of Medical Examiners, to this effect and undoubtedly we will be informed of your wishes in this regard.

Finally, we wish to assure you that we shall exercise the utmost care and effort to avoid any changes in the standards of education and licensure that will embarrass the enforcement of the Act and permit unlicensed persons under the present Medical Practice Act to practice as physicians and surgeons in California. We feel, as you do, that if this should happen, it would be a real blow to public health and the best interests of the medical profession, and we are just as anxious as you are to avoid such a calamity.

Very truly yours,
FRED B. WOOD,
Secretary.
By ARTHUR MCHENRY,
Statute Reviser.

SPECIAL ARTICLES

MEDICAL JURISPRUDENCE*

By HARTLEY F. PEART, ESQ.
San Francisco

The execution of a release by an injured person to the person whose negligence caused the injury, bars an action by the injured person against a physician for alleged negligent treatment of the injury by the physician. Two Superior Court decisions have been rendered recently in which this principle was adopted and used by the Superior Judges presiding in the cases.

In the first case the plaintiff was injured in an automobile accident and was treated by the physician. During the course of his treatment he made a settlement with the insurance carrier of the automobile by the operation of which he had been injured. He then brought his suit for alleged malpractice against his physician, and in answering the complaint the physician's attorneys pleaded that he had accepted a sum of money from, and executed a release to, the operator of the automobile which injured him. Plaintiff's counsel demurred to this defense, but after argument the demurrer was overruled, the Court stating:

> I am satisfied that the weight of the authority supports the view that a release by one injured by another's negligence of the negligent person from all causes of action and claims arising out of the injury prevents an action by him against a physician for negligent treatment of the injury. (Citing 50 A. L. R., page 1106, and note commencing at page 1108.)

In the second case, decided some months previously, the evidence showed that the plaintiff had executed a general release to a railway company for the sum of $50, in which she released the railway company from all consequences which might flow from the accident. Thereafter the plaintiff brought suit against the doctor who attended her for the injuries sustained by the accident. The attorneys for the physician moved for judgment on the ground that the settlement made by the plaintiff with the railway company prevented the plaintiff from recovering any judgment against her physician. In giving judgment for the physician the Judge said:

> One thing we have to bear in mind is that as a result of an injury through negligence there is only one cause of action. All these other elements may enhance the damages, or they may mitigate the damages, according to the circumstances of the particular case; but there is only one cause of action, whatever the consequences are. Those consequences, whatever they may be, as I say, merely enter into the damage that the person has suffered; and if a person satisfies that one cause of action, then it is satisfied. . . . Another thing that I want to point out is this: That the theory underlying this principle of law that we are applying here is very apparently this: It is one of the natural, proximate results of an injury that the injured person will consult a physician. That must be regarded as a proximate result of the accident. It follows also that it is another proximate result for the doctor to treat that injury; and it follows, further, that in connection with that treatment there is always the possibility of an erroneous diagnosis and an error in treatment. All those things, however, under the cases which have been cited—and which appear to be beyond question in their weight—all of those things are the natural, logical, and proximate results of the original injury; and that is the theory upon which this principle is based.

111 Sutter Street.

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* Editor's Note: This department of CALIFORNIA AND WESTERN MEDICINE, containing copy submitted by Hartley F. Peart, Esq., has been established by the California Medical Association Council. Each issue will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession. These will be compiled and edited by Mr. Hartley F. Peart, General Counsel of the Association.

CALIFORNIA STATE DEPARTMENT OF INDUSTRIAL RELATIONS*

Mr. President, and Ladies and Gentlemen comprising the California State Federation of Labor:

May I take this opportunity of thanking you for the invitation to address your convention regarding the activities and affairs of the California State Department of Industrial Relations, under whose administration, and through whose Divisions all of the labor laws of California are applied and enforced.

You will find this statement to be very brief and pertaining only to those very essential parts of the departmental work, wherein the working men and women of California are most vitally concerned.

INDUSTRIAL ACCIDENT COMMISSION

Under the Workmen's Compensation Insurance and Safety Act, the Industrial Accident Commission was instituted in 1911 for two purposes: one, to care for employees injured in employment; two, the prevention of injuries to the working people.

During the life of the Commission the population of California has increased from 4,200,000 to nearly 7,000,000 people, and in spite of the tremendous increase in population which carries with it a proportional increase in injuries to care for, and preventive measures to institute, the Commission has less employees today than it did thirteen years ago.

For the biennium commencing July 1, 1921, the Commission had an appropriation of $853,746 and for the biennium commencing July 1, 1935, $732,080.

In other words, in spite of an increased population proportionately increasing the work of the Commission, we have had our budget reduced more than $120,000, and the personnel by more than 20 per cent.

To show the increase in work, I would call your attention to the fact that in 1935 there were 262,955 injuries reported, as against 230,901 in 1934.

In 1923 the total premium intake of all insurance carriers dealing with compensation in this State was $13,961,000, and in 1935 for the same business the intake was more than $22,000,000—this shows a huge increase in the number of workers affected by the compensation laws.

Our Safety Department, which enforces all laws designed to insure the safety of employees while at work, now has twenty-nine employees where there were formerly fifty.

Amendments to the compensation law in the past fifteen years have tremendously increased the work of the Industrial Accident Commission, and owing to a decreased personnel caused by decreased budget, we now find ourselves in a position where, if we are to afford the working people of California the protection to which they are entitled under the Workmen's Compensation Law, we must have an increased budget for the purpose of increasing our staff of inspectors and enforcement officers.

IMMIGRATION AND HOUSING

The proper housing of working people, particularly in the agricultural and rural areas, is of particular importance and a tremendously big job.

California has more than seven thousand camps scattered all over the State in which workers are housed.

There are around two hundred thousand migratory agricultural workers in the State.

To inspect more than seven thousand camps and properly care for more than two hundred thousand people, we have four inspectors. It is silly to expect that four men can do all this work properly.

To enforce the State Housing Act there is one man working full time out of the Los Angeles office and one man part time out of the Sacramento office. Under these conditions proper enforcement is impossible. The lack of proper enforcement of the State Housing Act is costing the State of California thousands of dollars every year through loss in property value, due to faulty and poor construction of buildings. This loss exceeds by far the $42,000 which it cost the State to operate this Division last year.

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* An address by T. A. Reardon, Director, presented to the California State Federation of Labor, Sacramento, September 14, 1936.

DIVISION OF INDUSTRIAL WELFARE

This Division, which is entrusted with the enforcement of the orders of the Industrial Welfare Commission covering wages, hours, and working conditions of women and minors in California, effects in adjustments a very large increase to the earnings of these workers; and by routine inspections of payrolls and investigations of all complaints received, improper working conditions are improved, and hours of labor kept within the legal maximum.

During the past year this Division dealt with 10,964 plant inspections, investigations, calls, and audits.

By reason of its activities through its wage and audit adjustments it brought to the workers in this State $216,634.36 in the last fiscal year.

Comparing this wage collection of $216,634.36 to the cost of this Division to the State of approximately $27,000, you will note that this Division has paid for itself more than eight times over.

Despite this splendid showing, this Division has had its budget tremendously decreased in the past years and, like every other Division, with a lowered personnel it has been forced to try to carry on a great deal of additional work necessitated by a tremendous increase in the working population of the State.

DIVISION OF LABOR STATISTICS AND LAW ENFORCEMENT

During the last fiscal year this Division handled 22,768 wage complaints, 2,789 other complaints, and made 941 prosecutions. This Division of our Department is the police agency of the many labor laws of the State and, as you know, this is a real job all by itself.

However, and in addition to the labor law enforcement, $526,871.78 in wages was collected for the workers of the State who otherwise would have been cheated out of that amount.

When you compare the total of $526,871.78 wages collected with $172,520 which this Division cost the State of California last year, you will note that in wage collections alone this Division has paid for itself more than three times over.

CONCLUSION

By reason of the Social Security and State and Federal legislation designed to advance the interests of the working people of the State and nation, a tremendous amount of additional work has been placed upon this Department and the divisions comprising it.

I think you will agree with me that in spite of reduced budgets and lowered personnel our records show that a great deal of work has been done. There is a great deal more work that should be done and we would be happy to do it.

However, under the present budget and limited personnel we are tremendously handicapped, and if the working people of this State want stricter and more enforcement of the laws designed for their protection, it will be necessary for the State Legislature to allocate more money to the Department of Industrial Relations for the purpose of obtaining the necessary employees to carry on the work.

While the Department operates under the direction of Governor Frank F. Merriam, yet, to carry out the foregoing recommendations, it is mandatory that the Legislature make the necessary appropriations.

SUMMARY OF MORTALITY FROM AUTOMOBILE ACCIDENTS

The United States Bureau of the Census announces that during the four weeks ending September 26, 1936, eighty-six large cities in the United States reported 666 deaths from automobile accidents. This number (666) compares with 635 deaths during the four weeks ending September 28, 1935. Most of these deaths were the result of accidents which occurred within the corporate limits of the city, although some accidents occurred outside of the city limits.

For comparison, the number of deaths due to automobile accidents within city limits is desirable. Such figures are available for the four-week period ending September 26, 1936, and for the corresponding four-week period of 1935 for all of the eighty-six cities, the four-week figure in 1936 being 475 as contrasted with 463 for the corresponding four weeks in 1935.

Considering by four-week periods since January, 1931, total deaths from automobile accidents, whether within the city limits or outside, the lowest total (482) appears for the four-week period ending March 14, 1936, and the highest (890) for the four-week period ending December 22, 1934.

For the 52-week periods, September 26, 1936, and September 28, 1935, the totals for the cities were, respectively, 8,468 and 8,884, which indicate a recent rate of 22.8 per 100,000 population as against an earlier rate of 23.8, or a decrease of 4 per cent in the rate during the year.

Two cities reported no deaths from automobile accidents for the last four weeks, and six cities reported no deaths from automobile accidents for the corresponding period of 1935.

For the last four-week period reports as to whether deaths occurred from automobile accidents within city limits or outside were received from all of the eighty-six cities reported. In these cities in this four-week period, the total number of deaths from automobile accidents was 666, but only 475 of these were due to accidents within city limits.

Summary of Mortality from Automobile Accidents

City	Deaths from Automobile Accidents								Death Rate from Automobile Accidents Per 100,000 Population			
	Four Weeks Ending—				Fifty-two Weeks Ending—				Fifty-two Weeks Ending—			
	Sept. 26, 1936		Sept. 28, 1935		Sept. 26, 1936		Sept. 28, 1935		Sept. 26, 1936		Sept. 28, 1935	
	Total Deaths	Deaths Due to Accidents in City	Total Deaths	Deaths Due to Accidents in City	Total Deaths	Deaths Due to Accidents in City	Total Deaths	Deaths Due to Accidents in City	For Total Deaths	For Deaths Due to Accidents in City	For Total Deaths	For Deaths Due to Accidents in City
Total (86 cities).... (California cities follow)	666	475	635	463	8,468	6,463	8,884	6,968	22.8	17.4	23.8	18.7
Long Beach....	5	3	9	9	55	37	61	56	32.6	21.9	36.1	33.1
Los Angeles......	38	32	43	35	536	454	520	435	37.2	31.5	36.0	30.1
Oakland....	9	6	8	6	99	89	76	68	32.6	29.3	24.9	22.3
San Diego	6	6	4	3	60	46	74	54	35.4	27.2	43.6	31.8
San Francisco	9	8	0	0	65	63	66	65	9.7	9.4	9.8	9.7

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. IX, No. 11, November, 1911*

From an article on "Geographic Influences in the Etiology of Skin Disease" by Ernest D. Chipman, M.D., San Francisco.

It has, of course, long been recognized that certain diseases become more readily acclimatized and thrive better in some parts of the world than in others. . . .

From an article on "The Toxemias of Pregnancy" by Leroy H. Briggs, M.D., Oakland.

The toxemias of pregnancy are of absorbing interest, not only to the obstetrician, but even more so to the internist, the ophthalmologist, and the pathologist. Our present day knowledge of the subject has been gained chiefly from the results of the research worker, interpreted and correlated by the clinician. While many problems still await solution, the advances made within the past decade have been great, and the following paper will attempt a brief survey of some of them. . . .

From an article on "Unusual Cases of Syphilitic Osteo-Periostitis" by René Bine, M.D., San Francisco, Case 1.

Vertebral syphilis is so unusual a condition as to render the presentation of this case of more than passing interest. In its advanced stages, because of the similarity of signs, it is often difficult to differentiate such a lesion from infectious, traumatic or tuberculous processes, and in the pre-Roentgen and ante-Wassermann days, I feel certain that numerous cases were overlooked. . . .

From an article on "The Differential Diagnosis of Labyrinthine Affections" by G. P. Wintermute, M.D., Oakland.

The characteristic symptoms of labyrinthine affections are impairment of hearing, tinnitus, vertigo, spontaneous mystagmus, disturbance of equilibrium, sometimes nausea, vomiting and vasomotor disturbances, and very rarely head nystagmus. These symptoms may be excited either by disease of the end organ—the labyrinth—or by disease involving the nerve tracts leading from the labyrinth to its cerebral centers; and the symptoms vary in so far as the process is irritative in its effects or destructive, regardless of whether the lesion is in the end organ or along the central tracts. . . .

From an article on "Clinic Use of Psychotherapy, Illustrated by Cases from Private Practice" by Carl Renz, M.D., San Francisco.

The purpose of this paper is to discuss briefly the nature of psychotherapy, to illustrate its use from personal clinical experience, and to give a hint of its value in the work of the general practitioner. I shall not, therefore, give any historical data nor dwell to any great extent upon its psychological aspect, although the latter is a sine qua non for the understanding of the phenomena. . . .

Discussion.—Dr. H. D'Arcy Power, San Francisco: Some twenty years ago when the work of Charcot was in full swing, I was living near one of his assistants, Doctor Andre, so had a pretty close view of hypnotism and saw a great many cases. I think as Doctor Renz said that there is absolutely no danger or any great difficulties connected with this work except to the physician. He is the one most in danger because where you have a sprinkling of successes in hypnotism there are ten failures to every

(Continued in Front Advertising Section, Page 18)

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† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

* As stated on page 355 of the September, 1911, issue of the *California State Journal of Medicine*, owing to the illness of its editor, Dr. Philip Mills Jones, the *Journal* was brought out by the Publication Committee.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By C. B. Pinkham, M.D.
Secretary-Treasurer

BOARD PROCEEDINGS

The annual meeting of the Board of Medical Examiners will open in the State Capitol, Sacramento, Monday, October 19.

Approximately seventy-one applicants are expected to report for written examination.

Legal hearings will commence Tuesday, October 20, at 10 a. m., the calendar showing the following licentiates have been called before the Board under Section 14 of the Medical Practice Act to show cause why their licenses should not be revoked for various derelictions:

Isaac S. Clark of Long Beach, alleged narcotic addiction.

John E. Cummings, Los Angeles, alleged illegal operation, continued from July meeting.

Hugo Foss, Los Angeles, narcotic conviction.

Henry L. Gardner, San Francisco, aiding and abetting, continued from July meeting.

Oscar Charles Long, Brawley, federal narcotic conviction.

George W. O'Donnell, San Francisco, alleged illegal operation.

Frank J. Parizek, Los Angeles, narcotic dereliction.

Francis W. Steddom, Los Angeles, narcotic dereliction.

Samuel Twain, Berkeley, narcotic conviction.

Wade H. Walker, Long Beach, narcotic conviction.

George E. Watts, Los Angeles, alleged illegal operation.

Thomas D. Wyatt, Redding, alleged illegal operation.

George H. Wymann, San Quentin Prison, convicted for illegal operation.

"Sensational charges of attempts of intimidating prosecution witnesses yesterday interrupted the trial of four physicians, six business men, and four women in Superior Judge Crum's court on charges of violating the state illegal operation laws. As a result Judge Crum ordered the trial halted temporarily for a special hearing this morning. . . . In presenting the charges to the court, Deputy District Attorney Ferguson and John J. McMahon, San Francisco prosecutor assisting at the trial, urged Judge Crum to order William Byrne, former investigator for the State Medical Board, and R. L. Rankin, both of whom are defendants, placed in custody for the remainder of the trial. . . . Dr. W. Norman Powers, a defendant, who recently pleaded guilty to the conspiracy charge . . . according to Ferguson, charges that his wife in Seattle recently received a long-distance telephone call in which she was told to stop her husband from appearing as a prosecution witness or he would suffer 'dire consequences.' The prosecution also charges that because of threats to Bernice Tieman, another witness in San Francisco, the woman apparently has fled and cannot be found. Others assertedly approached are Paul de Gaston and Mrs. Clara (Laura) Miner, residing in San Diego. It is charged that the defendants operated a million-dollar illegal operation ring, extending from Seattle to San Diego. So complete was the organization, the state contends, that physicians working for the ring were transferred from city to city at frequent intervals, so that they would not become too well known. . . ." (Los Angeles *Times*, October 8, 1936.)

"Testimony was given by handsome Paul de Gaston, Hollywood actor, and 'star' state witness, who for three days has been unfolding asserted 'inside' workings of the powerful (coast-wide operations) ring. De Gaston, who, although not a licensed surgeon, has testified he performed forty illegal operations upon women patients in ten days for the ring, told jurors today that in Seattle an imposing parchment was framed on the wall of his office and

(Continued in Front Advertising Section, Page 27)

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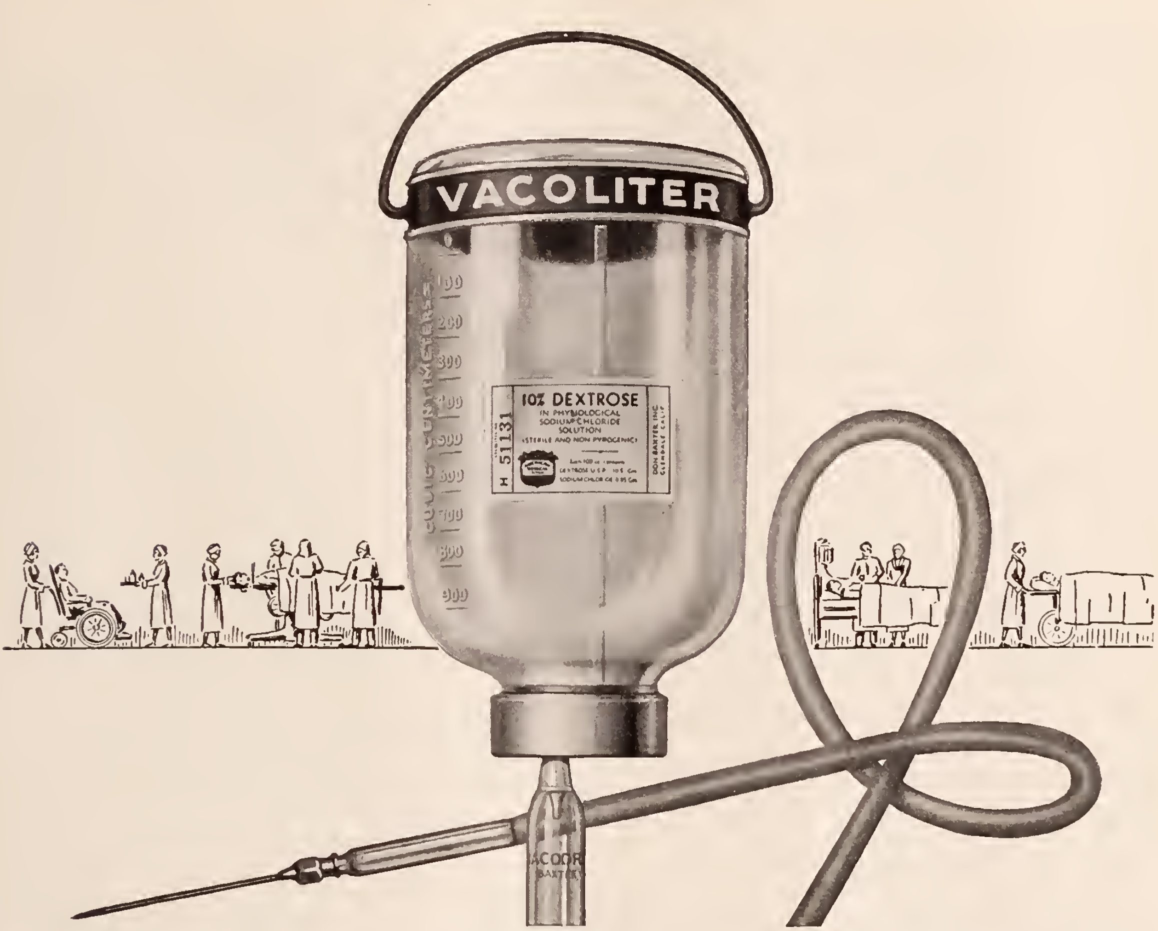
† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.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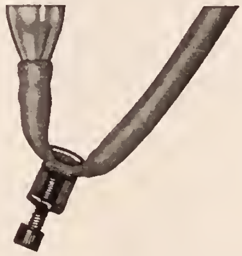

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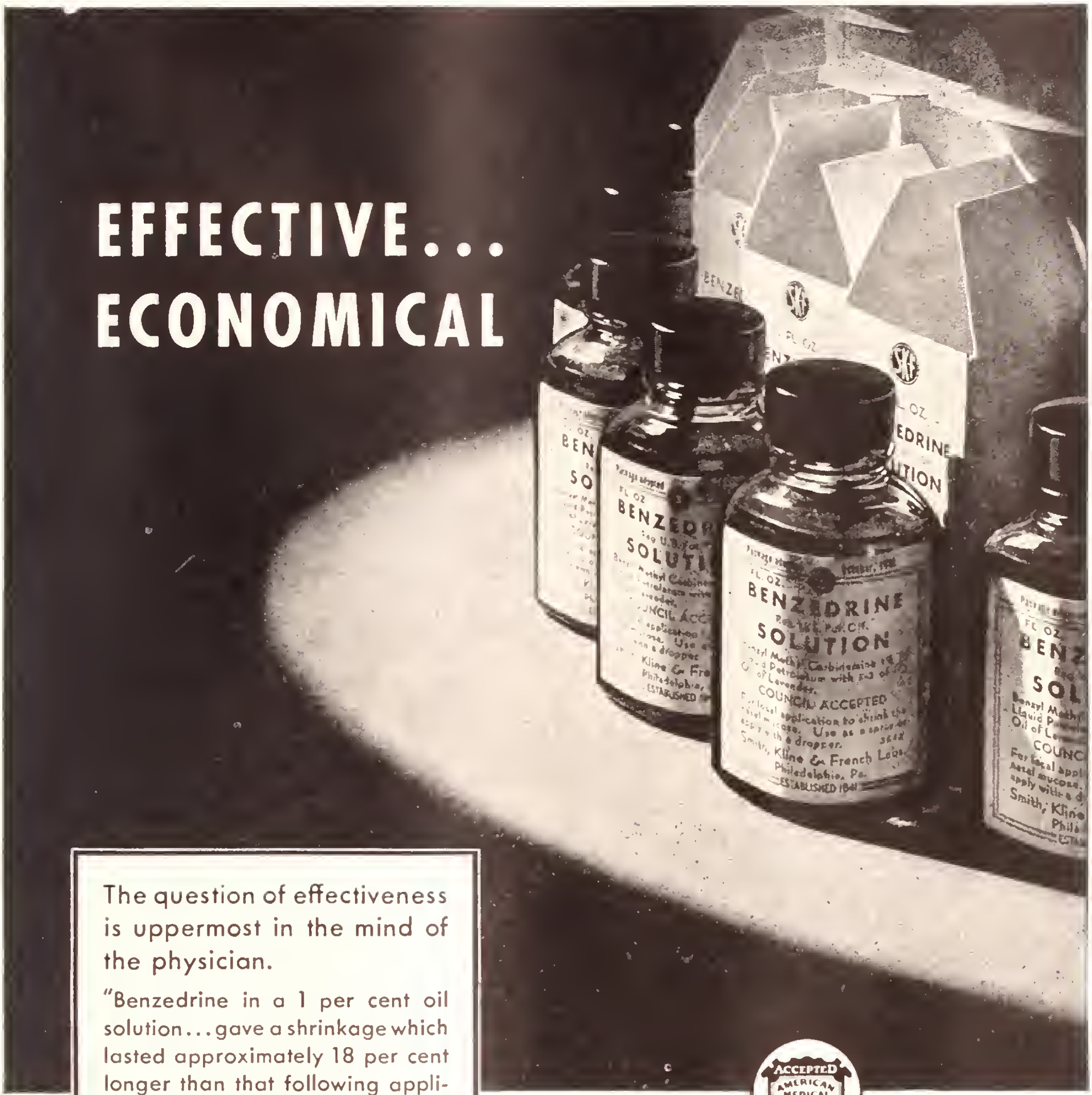
BOARD OF MEDICAL EXAMINERS

(Continued from Front Advertising Section, Page 27)

"After testifying for three days, giving details of the inner workings of the coast-wide illegal operation syndicate, Paul de Gaston . . . today will face the cross-examination of defense attorneys in Superior Judge Crum's court. De Gaston's testimony was used by Deputy District Attorney Ferguson and John McMahon, San Francisco prosecutor, in an effort to convict ten men and four women of a conspiracy to violate the state illegal operations law. Dr. W. Norman Powers, another defendant, already has pleaded guilty to the conspiracy charge and probably will be used as a witness against the defendants. During the trial William Byrne, former investigator for the State Medical Board, and Rankin were ordered placed in the county jail until the end of the trial after the prosecutors had made a showing that they had attempted to intimidate witnesses." (Los Angeles *Times*, October 13, 1936.)

"Fifteen men and women yesterday, in Superior Court, heard themselves accused of illegal surgery on a gigantic scale by the third member of their alleged tri-state ring to turn state's evidence. Dr. W. Norman Powers in Seattle yesterday declared that in the summer of 1935 he joined the purported Pacific Coast operations monopoly at a salary of $1,000 per week. There followed a tour of California, Oregon, and Washington, in which he witnessed the 'technique' of a large number of the organization's practitioners before he opened a clinic in Seattle. Like Paul de Gaston and Marvin Raithel, who already had testified, Doctor Powers was indicted following the coast-wide raid of last June. He is listed as one of the defendants in the present trial, although he pleaded guilty to a conspiracy count while the jury was being chosen. Doctor Powers began his story by naming R. L. Rankin, accused business genius of the alleged ring. He said he went with Rankin to Oakland, where he witnessed illegal oper-

(Continued on Page 39)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—*Giordano: Penna. Med. J., Oct. 1935*

But economy to the patient is also important.

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For shrinking the nasal mucosa
in head colds, sinusitis and hay fever.

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Common Constipation

The beaker at the left contains one dry Ry-Krisp wafer, crumbled. At the right is the same quantity of saturated Ry-Krisp—showing what happens when the liquids in the stomach come in contact with it. Each wafer absorbs five times its weight in water, producing bulk to stimulate peristaltic action.

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BECAUSE it is a tempting, highly palatable food which patients are glad to eat regularly, many physicians find Ry-Krisp ideal as a natural corrective for common constipation due to insufficient bulk.

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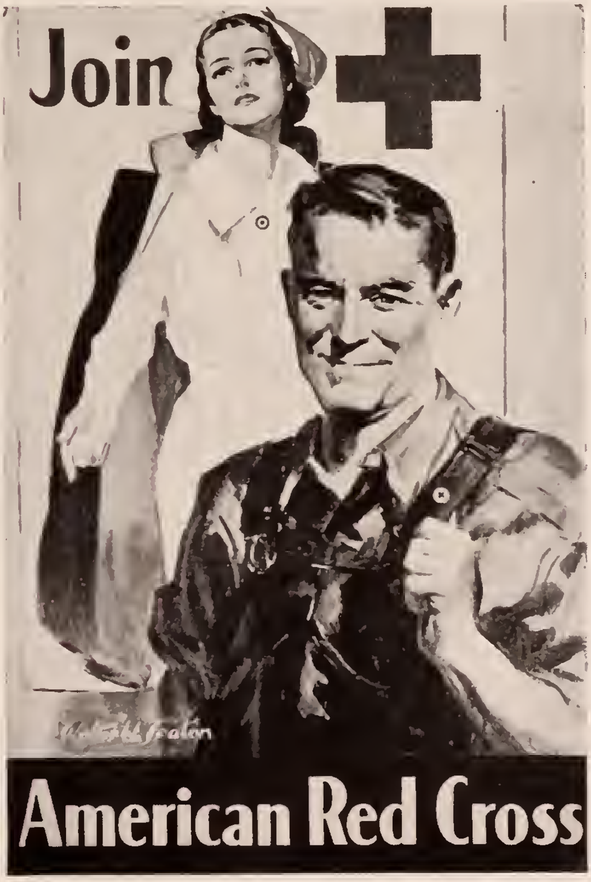

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Physicist

BOARD OF MEDICAL EXAMINERS

(Continued from Page 34)

-ations performed by Dr. James Beggs, one of the defendants. Doctor Powers continued that he and Rankin came to Los Angeles from San Francisco. Here, he said, he found headquarters of the purported syndicate and watched operations by Dr. George E. Watts, accused medical head of the organization. At the Hollywood Clinic, Doctor Powers said, he watched operations by other surgeons allegedly connected with the ring. Then followed a similar visit to Long Beach, where he said he met Grace Moore, another defendant. Then, he said, he returned to Seattle. He testified his salary began July 19, 1935, and ended in May, 1936. Doctor Powers said that he was soon sent back to Long Beach, where he performed from fifteen to twenty operations monthly for seven months. One day, he said, Rankin came into the Clinic with William Byrne, former investigator for the California State Medical Board, who is one of the defendants. 'Mr. Rankin introduced Mr. Byrne as the official who could guarantee protection from the law,' Doctor Powers said. . . . The prosecution placed Raithel, former San Jose druggist, on the stand in the morning session to link a number of the defendants with alleged overt acts. He testified he was employed at $300 per month to solicit cases for the clinics from druggists. He had conversations . . . in that connection, he said, with Defendants Rankin, Violette Pelligrini, Dr. Jesse C. Ross, J. O. Shinn, John Creeth, J. C. Perry, and Doctor Beggs. . . ." (Los Angeles *Examiner,* October 14, 1936.)

"The alleged gigantic tri-state illegal operations ring used a 'confusion' plan in all illegal operations, in a designed plan to make prosecution of doctors performing illegal operations virtually impossible, Dr. W. Norman Powers told Superior Judge Arthur Crum and the jury, while being cross-examined as a star witness for the prosecution at the trial of alleged members of the ring. Doctor

(Continued on Page 41)

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For Hernia . . .

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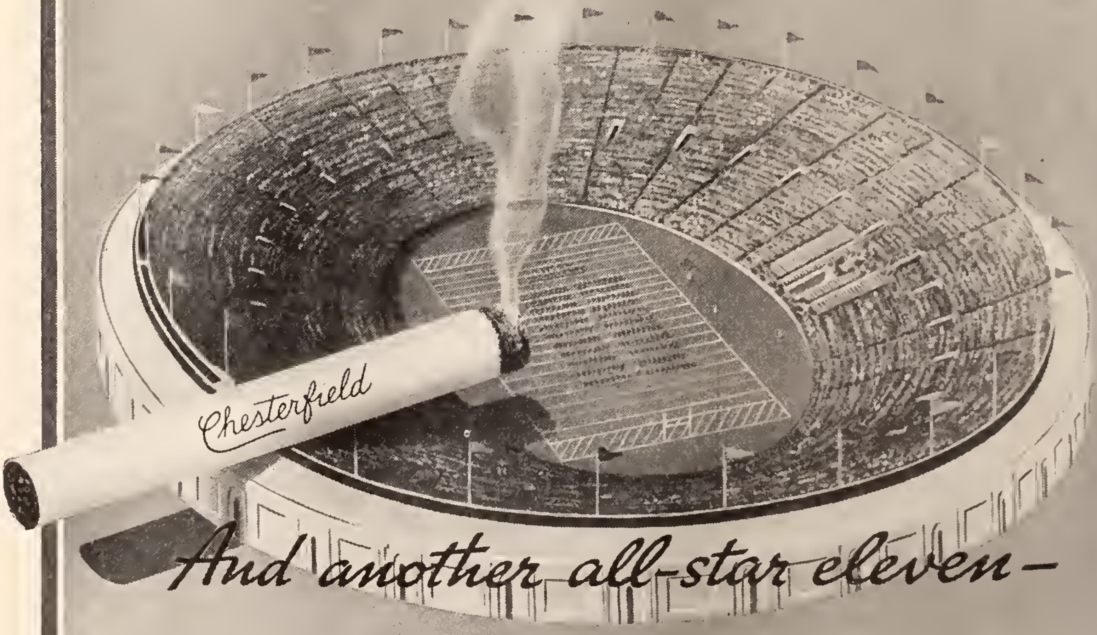
Head and shoulder, heart and soul,
Till you fall across the goal.



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BOARD OF MEDICAL EXAMINERS

(Continued from Page 39)

Powers said three doctors had to be in the room. Each was to be busy in some way in order to confuse the woman patient and make it impossible in case of subsequent trouble with the authorities for her to be positive in identifying which one performed the operation. Led on by Deputy District Attorney Vernon L. Ferguson, Doctor Powers told how this plan was used when an operation was performed on a nineteen-year-old Long Beach girl. Three physicians were in the room when she was placed on the operating table—Dr. Harry L. Huston, Dr. James Beggs and himself, Doctor Powers testified. . . . After the operation on the Long Beach girl, Doctor Powers declared, she became seriously ill and was sent to the General Hospital. . . . Doctor Powers said that Rankin offered the girl's mother $100 to keep quiet. . . ." (Los Angeles *Evening Herald-Express*, October 14, 1936.)

"Josephine Follett, receptionist for Dr. Jesse Ross, one of the defendants, yesterday described how the ring's Hollywood branch functioned. She testified that William Byrne, former State Medical Board Investigator and a defendant, was a frequent visitor at the clinic. 'All our patients were women,' she testified, 'and all the operations were abortion cases.' During the recess Judge Arthur Crum denied a request to release R. L. Rankin and Byrne on bail. The judge ordered them jailed for asserted attempts to tamper with witnesses. (United Press dispatch, dated Los Angeles, October 16, and printed in the San Francisco *News*, October 16, 1936.)

"Dr. T. C. O'Connor, Medical Director of Bret Harte Sanatorium at Murphys, today submitted his resignation to the San Joaquin County Board of Supervisors. Doctor O'Connor's action was closely followed by the resignation of four key members of his staff. . . . (Stockton *Record*, September 28, 1936.)

"Christie Jerian, healer . . . charged with violation of the State Medical Practice Act, in the alleged use of the prefix 'Dr.,' changed his plea to guilty of a technical violation of the law and was given a suspended sentence of $500 fine or one hundred days in jail. . . ." (Long Beach *Sun*, September 18, 1936.)

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3000 feet up in the Lake County Pines.

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(Continued on Page 45)

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(levo-meta-methylaminoethanolphenol hydrochloride)

brings rapid symptomatic relief in

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Olfactory nerves
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Nasopalatine n.

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In both acidosis and alkalosis, Karo is a carbohydrate of choice in the emergency of treatment. Karo consists of dextrins, maltose and dextrose (with a small percentage of sucrose added for flavor), not readily fermentable, rapidly absorbed and effectively utilized.

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DEFECTIVE ELIMINATION	
Metabolite	*Disease*
Phosphate	Nephritis
Carbonic acid	Emphysema Respiratory obstruction Myocardial failure Narcosis

CAUSES OF ALKALOSIS

EXCESSIVE LOSS OF ACID	
CO 2	Hyperventilation Tetany Cerebral lesions (respiratory center) Hysteria Excessive crying
HC I	Vomiting Pyloric stenosis Intestinal obstruction
EXCESSIVE INTAKE OF ALKALI	
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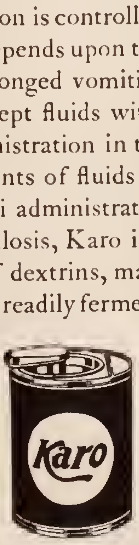

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Turf Officials Act, Revealing That Maeriel, Winner Last Wednesday, Was Drugged.
Coramine Found to Have Been Used—Owner Is Cleared of Any Suspicion.
RACING OFFICIALS ACT ON 2 TRAINERS TODAY
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In August, Maeriel, a 30 to 1 colt, flashed far ahead of the favorites in a Saratoga race. Five days before, Maeriel had run a poor third; past performances had never labeled the horse a winning one. A special analysis of Maeriel's saliva, after its unexpected win, showed that it had been stimulated with Coramine, a Ciba product.

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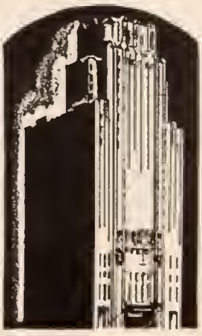

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Unexcelled Cuisine

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Sir Francis Drake
POWELL *at* SUTTER

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Calso Water: An efficient method of supplying the normal ALKALINE SALTS for counteracting ACIDOSIS.

Calso Water: Made of distilled water and the ALKALINE SALTS (C. P.) normally present in the healthy body.

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 41)

one-half years, after diagnosing the illness she had contracted as diabetes. He is said to have informed the child's parents that use of insulin in treating her would prove fatal. . . . The baby went into a coma, was finally rushed to a hospital and was saved after heroic efforts of local physicians. . . ." (San Jose *News*, September 30, 1936.)

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(Naturally the physician will remember that all these improved antitoxins are still protein solutions and will take the customary precautions to avoid or care for serum reactions.)

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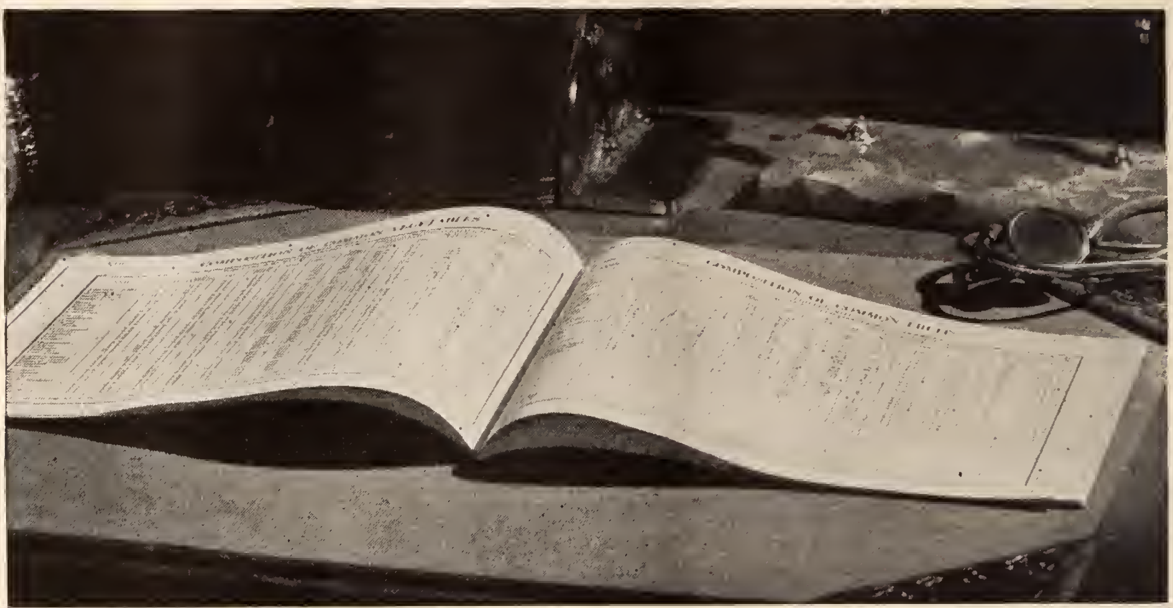

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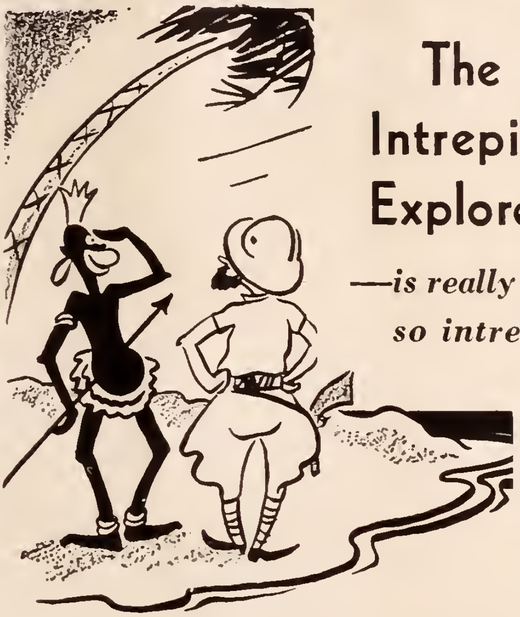

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For Treatment of Tuberculosis
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Compton, California

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Limited General Hospital
Fourteenth and Noe Streets, San Francisco

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General Hospital
Geary at Fifth Avenue, San Francisco

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New York Polyclinic Medical School and Hospital. A special program was presented on October 2 at the Polyclinic Hospital for the American Academy of Ophthalmology and Otolaryngology, and was well attended by doctors from many parts of the country.

The Polyclinic presented the following program for the Graduate Fortnight of the New York Academy of Medicine on October 19 and 26:

1. Traumatic Pudendal Hernia (lantern slides) by Dr. Harbert C. Chase. 2. Tissue Asphyxia and Shock by Dr. Frederick M. Allen. 3. Traumas in the Newborn as the Pediatrician Sees Them, by Dr. W. Morgan Hartshorn. 4. Prevention of Obstetric Traumas (moving pictures) by Dr. Everett M. Hawks. 5. Physical Therapy in Traumatic Conditions (demonstration and lentern slides) by Dr. Richard Kovacs. 6. Perforation of Cervical Esophagus (lantern slides) by Dr. H. B. Orton.

1. Traumas of the Nose and Face by Dr. Lee M. Hurd. 2. Recurrent Dislocation of Shoulder by Dr. Toufick Nicola. 3. Traumatic Lesions of Short Rotators of Shoulder (lantern slides and presentation of cases) by Dr. D. M. Bosworth. 4. Trauma and Optic Atrophy by Dr. Ervin Torok. 5. Trauma of Chest (lantern slides and moving pictures) by Dr. Pol N. Coryllos. 6. Recent Advances in Tissue Grafting (charts, photographs and moving pictures) by Dr. J. Eastman Sheehan. 7. Exhibition of Pathological Specimens by Dr. Aaron S. Price. Dr. E. L. Kellogg was chairman of the Program Committee.

At the October meeting of the Polyclinic Clinical Society there were notable contributions, namely: 1. The Insulin Treatment of Non-Diabetic Tuberculosis by Dr. James S. Edlin. The discussion was opened by Dr. George G. Ornstein and Dr. Frederick M. Allen. 2. B. Friedlander Infections by Dr. George Baehr of Mount Sinai Hospital. The discussion was opened by Dr. Gregory Schwartzman (by invitation) and Dr. Lee M. Hurd.

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BOOK REVIEWS

Books received for review are placed in the Library of the California Medical Association, in its central office at San Francisco. Book reviews are written by the Association Secretary.

BOOKS RECEIVED

The Practice of Medicine. By Jonathan Campbell Meakins, M. D., LL. D., Professor of Medicine and Director of the Department of Medicine, McGill University; Physician-in-Chief, Royal Victoria Hospital, Montreal; Formerly Professor of Therapeutics and Clinical Medicine, University of Edinburgh. Fellow of the Royal Society of Edinburgh; Fellow of the Royal Society of Canada; Fellow of the Royal College of Physicians, London; etc. Cloth. Pp. 1343, with 505 illustrations including 35 in color. Price, $10. St. Louis: The C. V. Mosby Company, 1936.

Keeping Your Child Normal. Suggestions for Parents, Teachers, and Physicians; with a Critical Estimate of the Influence of Psychoanalysis. By Bernard Sachs, M. D., Former President, New York Academy of Medicine; President, First International Neurological Congress, Berne, 1931; Director of Child Neurology Research. Cloth. Pp. 148. Price, $1.50. New York: Paul B. Hoeber, Inc., 1936.

Bright's Disease and Arterial Hypertension. By Willard J. Stone, B. Sc., M. D., F. A. C. P., Clinical Professor of Medicine, School of Medicine, University of Southern California, Los Angeles; Attending Physician to the Pasadena Hospital, Pasadena, California. Cloth. Pp. 352, illustrated. Price, $5. Philadelphia: W. B. Saunders Company, 1936.

A Dissertation on the Sensible and Irritable Parts of Animals. By Albrecht Von Haller (London, J. Nourse, 1755). Introduction by Owsei Temkin. Cardboard. Pp. 49. Price, $1. Baltimore: The Johns Hopkins Press, 1936.

Nutritive and Therapeutic Values of the Banana. A Digest of Scientific Literature. Paper. Pp. 143. Boston: Research Department, United Fruit Company, 1936.

Annual Report of the Board of Regents of the Smithsonian Institution, Showing the Operations, Expenditures, and Condition of the Institution for the Year Ending June 30, 1935. Paper. Pp. 580. Price, $1. Washington: United States Government Printing Office, 1936.

Why Quit Our Own. By George N. Peek with Samuel Crowther. Paper. Pp. 353. Price, 50 cents. New York: D. Van Nostrand Company, Inc., 1936.

The Legal Aspects of Milk Control. By James A. Tobey, Dr. P. H., Fellow, American Public Health Association; Member of the New York, District of Columbia, and United States Supreme Court Bars; Author of Public Health Law; Milk, etc. Cloth. Pp. 102. Chicago: International Association of Milk Dealers, 1936.

NEW MEDICAL BOOKS

Balyeat: Allergic Diseases, Their Diagnosis and Treatment	$6.00
Cannon: Digestion and Health	2.00
Holmes & Ruggles: Roentgen Interpretation	5.00
LaWall: Curious Lore of Drugs and Medicines	1.80
Luten: Clinical Use of Digitalis	3.50

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Principles and Foibles of Cancer Research in Regard to Etiology and Nature. By William Rienhoff, Sr., M. D., F. A. C. S. Paper. Pp. 200. Baltimore: Waverly Press, Inc., 1936.

United States Naval Medical Bulletin. Vol. 34, No. 4. Paper. Pp. 431 to 617. Price, 25 cents. Washington: United States Government Printing Office, 1936.

New and Nonofficial Remedies, 1936. Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1936. Cloth. Pp. 542. Chicago: American Medical Association, 1936.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1935, with the Comments That Have Appeared in the Journal. Cloth. Pp. 139. Chicago: Press of the American Medical Association, 1935.

BOOK REVIEWS

Lane Medical Lectures. Studies in Cardiovascular Regulation. G. V. Anrep, M. D., D. Sc., F. R. S., Professor of Physiology, Egyptian University, Cairo, Egypt. Stanford University Press. Vol. III, No. 3. Price, $1.25.

Anrep admits that these lectures do not give a full account of circulatory regulations. He has restricted himself to his personal experiences. He sought to describe things as he saw them. A large field of circulatory pathology is covered in these five lectures dealing with: (1) Proprioceptive Mechanism of Cardiovascular Regulation; (2) Respiratory Regulation of the Heart Rate; (3) The Dynamics

(Continued on Next Page)

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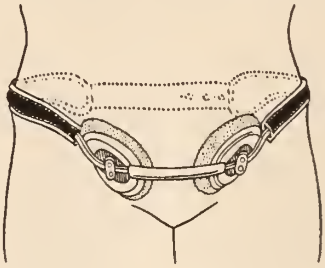

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BOOK REVIEWS

(Continued from Preceding Page)

of the Coronary Circulation; (4) Coronary Blood Flow; (5) Blood Flow Through Skeletal and Plain Muscles.

Many heard these lectures, some did not; all should be glad to have them available for careful study.

Keeping Your Child Normal. Bernard Sachs, M. D. Paul B. Hoeber, Inc. Price, $1.50.

Sachs in this 135-page book presents suggestions to parents, teachers, and physicians as guides to keeping a child normal. Fine suggestions they are, and the advice will be of definite value to every parent.

The chapter on the use and abuse of psycho-analysis is excellent and should serve in bringing a desired degree of common sense to parent and physician alike.

The text can be recommended to parents with every confidence that it will be helpful.

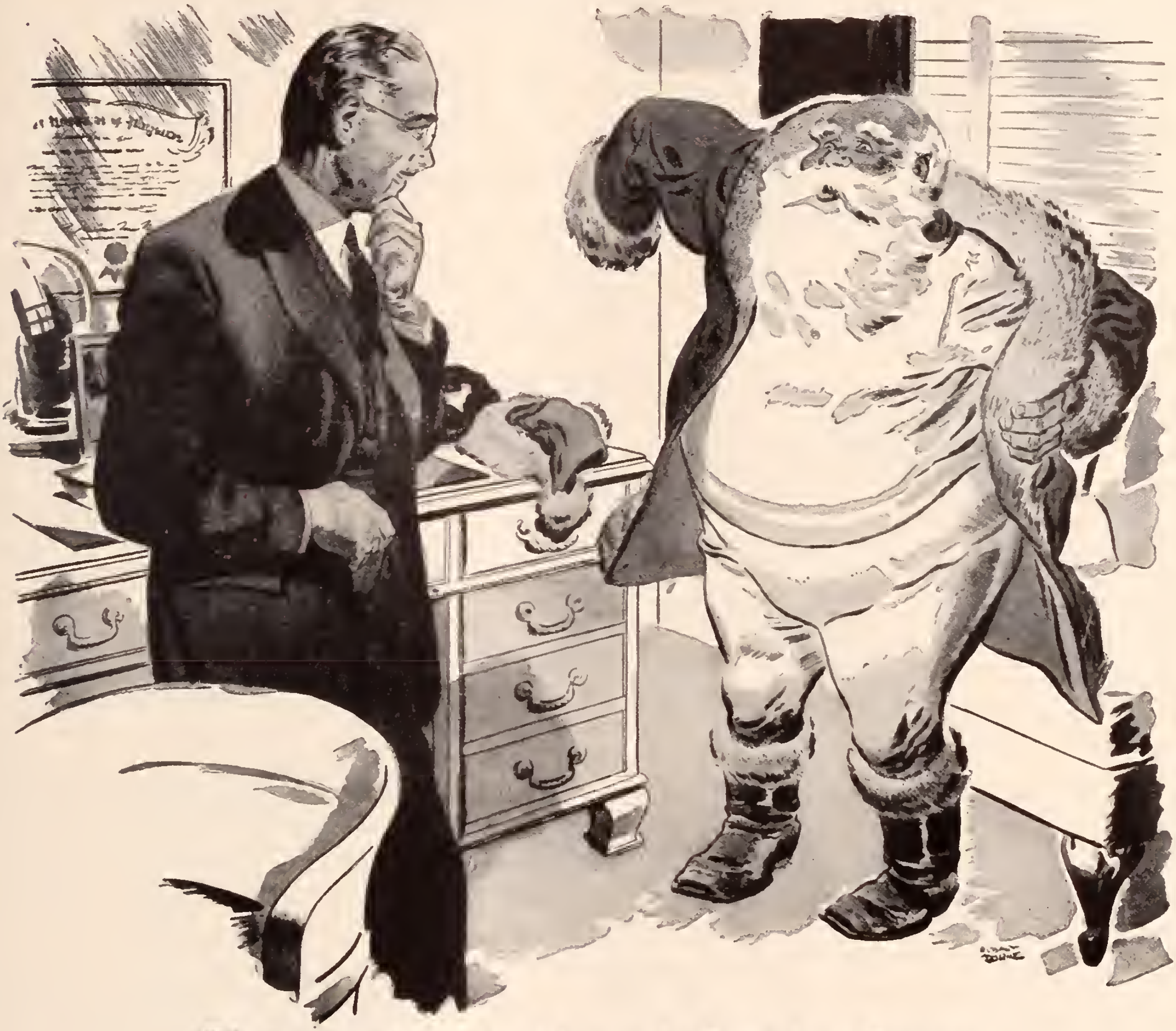
Bright's Disease and Arterial Hypertension. By Willard J. Stone, B. Sc., M. D., F. A. C. P., Clinical Professor of Medicine, School of Medicine, University of Southern California, Los Angeles; Attending Physician to the Pasadena Hospital, Pasadena, California. Pp. 352, with 31 illustrations. Philadelphia and London: W. B. Saunders Company, 1936. Cloth, $5 net.

Stone presents this monograph on the basis of personal cases over a period of twenty years, his personal studies, and the accepted literature. He has succeeded in placing before medical men a concise, practical discussion of the factors involved and has emphasized clinical features. He has contributed to a better understanding of Bright's disease and arterial hypertension.

One is impressed with the clarity of this presentation to such degree that there is no hesitancy in stating that every medical man will serve his patients more efficiently if he acquires the fundamentals of this text. The pathologic as well as the physiologic factors, their clinical

(Continued on Page 14)

One of a series of advertisements prepared and published by PARKE, DAVIS & CO. in behalf of the medical profession. This "See Your Doctor" campaign is running in a number of leading magazines.



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There is only one sane thing for any overweight person to do. That is to see his doctor. Your doctor can determine whether obesity is caused by some fundamental physical disorder—such as glandular derangements—or whether it is the result of unwise eating combined with insufficient exercise.

Diet is a form of treatment; and it should *never* be prescribed by anyone but a physician. The doctor's knowledge is necessary in determining what foods, and how much, may be eaten—what diet will be safe and pleasant, yet effective, in removing unneeded, unsightly fat.

If *you* are overweight, or in doubt about what weight you should maintain, do something about it. But don't let well-meaning friends, or the fellow you met while on vacation, prescribe for you. See your doctor.

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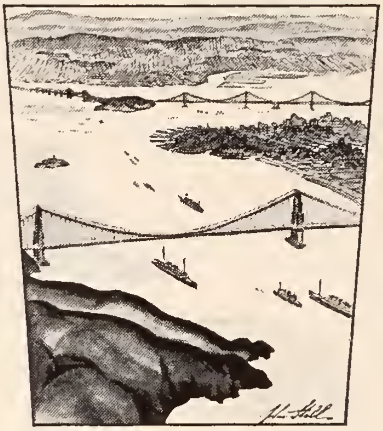

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BOOK REVIEWS

(Continued from Page 12)

manifestations and therapy, are admirably correlated. The section on acute hemorrhagic nephritis is outstanding in its completeness. Some 140 autopsy abstracts are very instructive.

Here, then, is a text that deserves a place in the library of physicians in order that it may be frequently consulted, because it is dependable in every respect.

A Textbook of Obstetrics: By Edward A. Schumann, A. B., M. D., F. A. C. S., Professor of Obstetrics, School of Medicine, University of Pennsylvania; Surgeon-in-Chief, Kensington Hospital for Women; Gynecologist and Obstetrician to Philadelphia General and Memorial Hospitals; Obstetrician to Chestnut Hill Hospital; Consulting Gynecologist to Frankford, Jewish, Burlington County and Rush Hospitals. Pp. 780, with 581 illustrations on 497 figures. Philadelphia and London: W. B. Saunders Company. 1936. Cloth, $6.50 net.

This is a new text by a recognized authority. It is an excellent text, complete, well written, good illustrations, and specific in detail. Not much more need be said than to state that this monograph will be found to be very satisfying as a guide and should be favorably received by every physician engaged in obstetrical practice.

Surgical Clinics of North America. Issued serially, one number every other month. Volume 16, Number 3. New York Number, June, 1936. Pp. 277, with 79 illustrations. Per clinic year, February, 1936, to December, 1936. Philadelphia and London: W. B. Saunders Company. 1936. Paper, $12; cloth, $16 net.

A continuation of this well-known series, containing some interesting cases and several that may well have been eliminated. It is quite easy to cull out the clinic report that reveals lack of preparation and the casualness of the clinician. Ten of the subjects establish the value of this number. The symposium on the relief of pain is the outstanding feature.

International Clinics. Volume 3. Forty-Sixth Series. J. B. Lippincott Company.

An acceptable selection of papers, cases, and discussions constitute the worth of this third volume.

Principles of Chemistry. By Joseph H. Roe, Ph. D., George Washington University. C. V. Mosby Company. Price, $2.75.

This is an introductory text of inorganic, organic, and physiologic chemistry for nurses and students.

Fundamentals of Human Physiology. By J. J. R. McLeod, M. D., and R. J. Seymour, M. D. Fourth edition. C. V. Mosby Company. Price, $2.50.

Designed and written for elementary students and approved to that end.

An Historical Sketch of Los Angeles County, California: From the Spanish Occupancy, by the Founding of the Mission San Gabriel Archangel, September 8, 1771, to July 4, 1876. Prepared by Col. J. J. Warner, Judge Benjamin Hayes, and Dr. J. P. Widney. A reprint of the original edition published by Louis Lewin & Company, 14 Spring Street, Los Angeles, 1876. To which is added an introduction by Doctor Widney, July 4, 1936. Pp. 159, with portraits. Los Angeles: O. W. Smith. 1936.

Responding to the appeal of President Grant that each county in the United States should, in commemoration of the first century of the republic about to close, gather and publish the annals of its geographical section, the "Literary Committee of the Los Angeles Centennial Celebration" undertook to secure the historical survey so sensibly suggested; and with characteristic public-spiritedness, three of the pueblo-town's most distinguished citizens—Don Juan J. Warner, of Warner's Rancho fame; Judge Benjamin Hayes, presiding in early days by federal appointment over most of Southern California; and Dr. Joseph P. Widney, destined to found the first medical col-

(Continued on Page 17)

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BOOK REVIEWS

(Continued from Page 14)

lege in the Southland—soon set to work energetically, finding it no easy task, despite the wealth of their own personal experiences and recollections, both to assemble and accurately check off such data as, fortunately, then was available from those pioneers still living, and to whip it into shape for the cannon-firing and oratorical fireworks in which the Angelenos were sure to indulge. That the result, from a strictly critical standpoint, was not 100 per cent perfection is not to be wondered at; but, considering that the self-sacrificing scribes had no forerunner in any similar local publication to guide or inspire them, it is not surprising that the modest booklet on straw paper and in ink strongly suggestive of shoe-blacking should, in a few years, become so scarce and unique that it long ago proved a costly item for Californiana collectors, making the enterprise of the republisher, himself long known to the Los Angeles book world, all more laudable. But two or three other booklets had previously appeared from Los Angeles presses and about the county, and it has generally been considered that Horace Bell's "Reminiscences of a Ranger" was the first pretentious work published (in 1881) in Los Angeles but now that the Smith reprint presents this so-called centennial history as a dignified volume of almost 160 pages, additional honors are due the veteran survivor of the trio of authors, the distinguished nonagenarian of the California medical profession, who was also the founder of the Los Angeles County Medical Association, for his enviable part in producing, after all, the first-known Los Angeles book!

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By agreement among themselves Colonel Warner, who had come to Southern California before the outbreak of the war with Mexico, and therefore knew better than many others the earliest events, wrote of the period from September 8, 1771, to January, 1847; while Judge Hayes, whose judicial peregrinations from Los Angeles to San Bernardino and San Diego made him familiar both with land and folk, told the happenings of the next two decades. Then Doctor Widney took up the narrative, closing his equally interesting story with the great day of the century, July 4, 1876. Not having yet come to his own, in his notable life work as pioneer educator and medical scientist, Doctor Widney has little to say of himself; but this reprint will ever be of exceptional value in the delightful foreword which he adds to pay his personal high tribute to the character and attainments of his literary colleagues. Colonel Warner having, as he says, "married among the Spanish and lived their life," no longer felt quite at home with his native English, and Judge Hayes was always modest and shy of appearing in print, although such an indefatigable researcher in history that the "Hayes Collection" has long been one of the glories of the Bancroft Library; with the result that both writers brought their manuscripts to the genial Doctor for such further elucidation as he might deem best! It is because of this incident, justifying, if ever, a wee bit of self-satisfaction, that what Doctor Widney has to say generously of his coworkers so redounds to the credit of all three concerned. "Colonel Warner," he testifies, "was a man of intelligence and of careful, observant mental habit; whether he kept a diary or not, I do not know, but every word written by him may be accepted as absolutely correct. I knew the man well, and it would take strong proof to make me question the accuracy of any statement he might make. Judge Hayes was a cultured gentleman, also of careful and methodical habits, who kept written records of men and events, and filed carefully much of the current printed matter. I attended as his physician in his last illness; and knowing the man intimately, I can unhesitatingly say that any statement made by him may be accepted as true, so far as human precaution can substantiate any historical statement." Well may the student of California history

(Continued on Next Page)

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BOOK REVIEWS

(Continued from Preceding Page)

be thankful, not only for this pioneer Warner, Hayes, and Widney work, but that a Los Angeles publisher having had the courage to make it more accessible in such a reprint, Doctor Widney has survived to tell just how the centennial sketch came into existence, and what manner of pioneer men did the desirable job.

Dr. Colwell's Daily Log for Physicians. Colwell Publishing Company, Champaign, Illinois. Price, $6.

This reviewer has stated in several former reviews that no one has yet prepared a better financial record book for physicians. Here in one volume is a simple form for daily charges for service and record of patients, monthly summary of income and expense, surgery, narcotics, births, and final summarization for the entire year. You do well, doctor, to adopt this record form.

TWENTY-FIVE YEARS AGO

(Continued from Text Page 520)

From an article on "The Prostate in Chronic Gonorrhea" by W. P. Willard, M.D., San Francisco.

I am taking up this rather time-worn subject again on account of the number of cases that I have seen lately from the hands of other men, in which the prostate was entirely overlooked as being the real cause of a prolonged urethritis. . . .

From an article on "Minority Report on Contract Practice" by D. A. Hodghead, M.D., San Francisco.

To the Officers and Members of the State Medical Society: The question of contract practice has never been fully discussed in the medical organizations, nor has it ever been fairly presented by the medical journals. I shall not

(Continued on Page 21)

VITAMIN UNITS AND STANDARDS

● The past five years have brought agreement between biochemists of the various nations as to suitable units and standards of reference for most of the vitamins essential to man. The practice of expressing the vitamin potencies of foods and other biological materials in terms of *International Units* is, therefore, fast becoming universal.

Believing that these units and the standards upon which they are based would be of interest to our readers, they have been tabulated and defined below (1):

Vitamin A

The reference standard is a solution of pure beta-carotene in an inert oil, of such concentration that one gram of solution contains 300 micrograms (0.300 mg.) of beta-carotene. The International Unit, or I.U., of vitamin A is the vitamin A activity of 2 mg. of this standard solution, or 0.6 micrograms of beta-carotene.

Vitamin B1

The reference standard is the concentrate produced from rice polishings, by a specified adsorption method, in the Medical Laboratory of Batavia (Java). The International Unit for vitamin B_1 is the vitamin B_1 activity of 10 mg. of this standard adsorption product.

Vitamin C

The standard of reference for vitamin C is a specified sample of pure levo-cevitamic acid (levo-ascorbic acid). The International Unit for vitamin C is the vitamin C activity of 0.05 mg. of this standard.

Vitamin D

The reference standard for vitamin D is a solution of irradiated ergosterol, prepared under specified conditions at the National Institute for Medical Research (London). The International Unit for vitamin D is the vitamin D activity of 1.0 mg. of this standard solution.

These International Units for expressing vitamin contents have been specified in the most recent Pharmacopoeia of the United States (2) as well as by the Council on Pharmacy and Chemistry (3) and the Council on Foods of the American Medical Association (3), and provision has been made for distribution of the standards in this country (4).

These units have been used to express vitamin potencies in recent studies on canned foods, the results of which further emphasize the fact that these foods rank among the most important sources of the vitamins essential in human nutrition (5), (6), (7).

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(1) 1935. Nutrition Abstracts and Reviews 4, 709.
(2) The Pharmacopoeia of the United States of America, Eleventh Decennial Revision, p. 261.
(3) 1936. Report of the Council, J. Amer. Med. Assoc. 106, 1733.
(4) 1935. J. Assoc. Official Agr. Chem. 18, 610.
(5) 1935. J. Home Econ. 27, 658.
(6) 1936. Food Research 1, 223.
(7) 1935. J. Nutrition 9, 667.

This is the nineteenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

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TWENTY-FIVE YEARS AGO

(Continued from Page 18)

impose upon you by endeavoring to present all of the arguments, pro and con, but in a condensed way to give some views in defense of contract practice. . . .

From an article on "Salvarsan as a Nerve Tonic and Alterative" by Douglass W. Montgomery, M.D., San Francisco.

Since the fall of 1907 I have been, from time to time, consulted for cutaneous symptoms by a neurasthenic who first came on account of an erythematous eczema of the face and hands, that quickly cleared up under appropriate measures. Like many of his class, he became obsessed with the idea that he had syphilis, and the agitation in regard to salvarsan shook his ideas into acts, and he came to the city resolved to receive a treatment. . . .

From an article on "Proceedings of the Alameda County Medical Society" by A. A. Stafford, M.D., Alameda.

Treatment of Whooping Cough. When your Program Committee asked me to present a paper at this meeting I hesitated at selecting for my subject such a common, every-day theme as whooping-cough; but upon second thought, the very frequency with which the practitioner meets with the disease or some of its complications or sequelae, seemed to justify me in calling to your attention this malady, which, I fear, we all are apt to pass over hurriedly as not being worthy of our earnest attention. Thus we lose sight of the fact that we are dealing with a serious disease with very remote and lasting sequelae. . . .

From an article on "Bismuth-Iodin Paste in Discharging Sinuses" by L. D. Green, M.D., San Francisco.

In a case of discharging sinus following an operation for carcinoma of the breast, the surgical measures usually employed in such cases failed to close the sinus. After trying the various methods for two months, Beck's Bismuth Paste was used for three months, also without success. I then incorporated in the paste tincture of iodin, with the result that with three injections the sinus closed in ten days. I have since then used it in a number of other cases of discharging sinus with equally good results. . . .

BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 520)

illicit surgery combine required patients to sign blank case record sheets before operations. In case operations resulted unfortunately, it is claimed by the prosecutors that the blanks were filled in with names of ailments which would make it appear that the surgery was attempted to save the life of the patient. Indelible pencil invariably was used, according to testimony of Inspector George Engler of the San Francisco Police Homicide Squad, because the writing thus showed uniformity, no matter how long a period elapsed between the operation and the development of adverse conditions. Mrs. Woods testified that she received one of the blanks, only to learn that later it had been filled in with a fictitious ailment after she had become seriously ill." (Los Angeles *Examiner*, October 20, 1936.)

"How she was taken from her home against her will, while suffering from blood poisoning as the result of an asserted illegal operation, and was placed in an apartment house at 1175 North Vermont Avenue for treatment, was described today by Mrs. Gladys Duckworth of Santa

(Continued on Next Page)

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

Monica at the trial of thirteen men and women accused of being members of a coast-wide operations syndicate. While ill in the apartment house, she underwent another operation, which was performed without anesthetic on a kitchen table of the apartment, she declared. This operation, Mrs. Duckworth testified, was performed by Dr. H. L. Huston, with Bessie McCarthy in attendance as nurse. . . . The third operation, Mrs. Duckworth testified, was performed in August, 1935, by Dr. Valentine St. John, also a defendant in the case. Within five months of the third operation, she said blood poisoning became so critical that she was unconscious most of the time and it was then that, against her wishes, she was bundled into an automobile and taken to the apartment house. Later, she said, she was treated at a hospital in Hollywood, and still later taken to the General Hospital. While there, she said, John Creetch (Creeth), another defendant, called on her. When he left, she said, she found $100 under her pillow." (Los Angeles *Evening News,* October 20, 1936.)

"Bonds of three of the fourteen defendants in the wholesale illegal operations trial were raised from moderate sums to $5,000 each by Superior Judge Arthur Crum yesterday after a witness had told an amazing story of practices at the San Jose 'Clinic' of the asserted Pacific Coast ring. Nurse Viollette Pelligrini's bail was increased from $1,500 and the bonds of Dr. George E. Watts and Dr. Jesse C. Ross were raised from $2,500 each, after the astounding story of Miss Bernice Tieman, former San Jose nurse for the purported giant illicit surgery combine. In increasing the bonds, Judge Crum acted on his own motion, after Deputy District Attorney Vernon Ferguson had surprised the five defense lawyers with the announcement, 'The State rests.' Miss Tieman, San Francisco trained nurse, was produced by the prosecution in a surprise gesture. She had been sought for a month. The statement by Deputy District Attorney J. J. McMahon, San Francisco Special Prosecutor at the trial, that she had been frightened into hiding by threats caused Judge Crum two weeks ago to revoke the bonds of Rankin, business head of the asserted combine, and Byrne, former State Medical Board officer, and commit them to the county jail for the duration of the trial. 'Mr. Rankin told me after the raid on the clinics last June that they would get rid of me if I turned State's evidence,' Miss Tieman said. Miss Tieman is one of the thirty-one persons indicted at San Francisco in connection with the alleged ring's operations, including the group on trial here. . . ." (Los Angeles *Examiner,* October 21, 1936.)

"A pretty brunette nurse, 'prize mystery witness' for the State, testified today that she saw the bodies of two prematurely born babies destroyed at a clinic specializing in illegal operations. The witness was Miss Bernice Tieman, twenty-five, who was rushed here by plane from San Francisco." (Associated Press dispatch, dated Los Angeles, October 20, and printed in the San Francisco *Examiner,* October 21, 1936.)

"A nineteen-year-old blonde took the witness stand today at the trial of thirteen defendants accused of being members of a gigantic unlawful surgery syndicate, and told of an illegal operation she said was performed on her by Dr. George Watts, one of the defendants. . . . Deputy District Attorney Vernon Ferguson, handling the prosecution, said he was laying the foundation for his plan to prove that in the 'chain store' operation of the various clinics of the syndicate, large sums were frequently sent by telegram to R. L. Rankin, another defendant, and asserted 'business brains' of the organization. Ferguson said he would prove that many thousands of the million dollars he claims the syndicate made in 1935 were sent to Rankin by wire. Ferguson also said that later he would

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introduce evidence to show that doctors with the firm sometimes, in order to make their business more lucrative, performed operations on women who needed none and simply were worried and fearful that they did need an operation." (Los Angeles *Herald-Express*, October 15, 1936.)

"Two women, a doctor and three Western Union messengers yesterday testified in Superior Judge Crum's court, adding new details to the charge against ten men and four women on trial accused of violating State illegal operation laws. The first woman called was Dorothy Woods. . . . She was followed on the stand by Josephine Follet, who testified she was a receptionist and nurse in a Hollywood clinic maintained by the syndicate. Mrs. Follet said that frequently while the office was in operation it was visited by William Byrne, at that time an investigator for the State Medical Board, who seemed to be friendly with the doctors who operated the clinic. In between the testimony of these witnesses, Deputy District Attorneys Ferguson and McMahon, the prosecutors, called three Western Union boys to testify to the delivery of money to R. L. Rankin, one of the defendants and accused of being the brains of the organization. The messengers testified that the money was taken to Rankin by them from various suburban clinics, assertedly operated by the Syndicate. Another witness called was Dr. Roy Buffum, Los Angeles physician. Doctor Buffum testified that in 1935 he was at liberty on probation for violation of the Medical Practice Act and that at that time he was approached by Rankin, who sought to induce him to join the Syndicate and assist them in opening another illegal operations clinic. Doctor Buffum testified that he refused the offer, despite the fact that, on a later visit, Rankin was accompanied by Byrne, who he said offered immunity from prosecution." (Los Angeles *Times*, October 16, 1936.)

"'Join or else' methods employed by members of the Pacific Coast illegal operations ring, today had been recounted to a jury by one who joined—and paid $1,000 monthly for the privilege. She was Mrs. Laura Miner, confessed operator of an operation clinic in San Diego, who testified yesterday for the prosecution against thirteen asserted members of the ring now on trial. . . . Mrs. Miner declared that a year ago William Byrne, one-time investigator for the State Medical Board and one of the defendants, approached her and said that unless she joined the Syndicate, he would cause her arrest. . . . Her connection with the syndicate was halted last June 4, she said, when Byrne warned her via telephone that 'trouble was brewing.' Another witness yesterday was Dr. Charles B. Pinkham, for twenty-three years secretary of the State

(Continued on Next Page)

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

Medical Board. He testified that in 1934 R. L. Rankin, a defendant, who was said to be the 'brains' of the ring, boasted to him the law was powerless to prosecute the ring successfully. . . ." (Los Angeles *Evening News*, October 15, 1936.)

"An alleged $60 illegal operation that turned out wrong and cost R. L. Rankin, head of the Medical Acceptance Corporation, and alleged 'business brains' of a gigantic tri-state unlawful surgery ring, $310 to settle, was described by a Long Beach lawyer in Superior Court today. . . ." (Los Angeles *Herald-Express*, October 16, 1936.)

"Witnesses sufficient to continue another two weeks the trial of fourteen defendants in the tri-state illegal operations case, were listed yesterday by prosecution and defense attorneys, as the sensational hearing went into its fourth week in Superior Judge Arthur Crum's court. Deputy District Attorneys Vernon Ferguson of Los Angeles and John J. McMahon of San Francisco said the prosecution would not rest until next Thursday or Friday. . . . The State claims Rankin and Watts, with the official connivance of Byrne, set up large illegal operations mills in Los Angeles, the headquarters, and at San Diego, Long Beach, Hollywood, San Francisco, Oakland, San Jose, Portland, and Seattle. 'In the first year, 1934, the syndicate grossed $800,000,' McMahon charged. 'The income was larger in 1935 and was grossing even larger for 1936 before we launched our raids last summer." (Los Angeles *Examiner*, October 19, 1936.)

" 'The syndicate controls the District Attorney's office and the police and sheriff's offices in Los Angeles and is paying off the State Medical Board.' That is what prospective members of the coast-wide illegal operations ring were told when invited to join the operation monopoly, it had been testified today at the trial of thirteen alleged members of the ring. Dr. H. N. Tatem (licensed chiropractor), physician, was the State's witness who so testified yesterday in a dramatic session of the trial, today in its third week. . . . " (Los Angeles *Evening News*, October 17, 1936.)

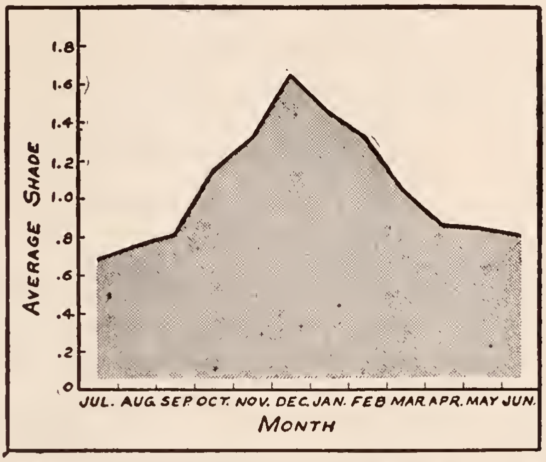
"Prepared to close the prosecution's case against ten men and four women charged with violating the State illegal operations laws, V. L. Ferguson, Deputy District Attorney, and John J. McMahon, San Francisco Prosecutor, today will call additional witnesses in Superior Judge Crum's court. . . . Meanwhile the battery of defense counsel, Leonard Wilson, Otto Emme, David A. L'Esperance, Clarence W. Morris, and B. R. Rountree, announced they are prepared to open the defense of their clients at once and disprove the charges made by the prosecution." (Los Angeles *Times*, October 19, 1936.)

"Eleven of thirteen defendants were convicted on various counts and two were acquitted at the conclusion late yesterday of the month-long trial of nine men and four women on charges of conducting a gigantic Pacific Coast illegal surgery syndicate. Reading of the 117 separate verdicts required more than an hour and a half in the courtroom of Superior Judge Arthur Crum. Receiving the heaviest weight of the jury's judgment, convicted on five of the nine counts, were R. L. Rankin, asserted business head of the tri-state combine and organizer of its finance company, the Medical Acceptance Corporation; William A. Byrne, the ring's 'trouble shooter,' while he served as special officer for the State Medical Board; J. O. Shinn, Medical Acceptance Corporation executive; Drs. George E. Watts, Chief Surgeon, Jesse Ross, and James Beggs; Grace Moore and Lillian Wilson, nurses and office assistants. Viollette Pelligrini, nurse, was con-

(Continued on Page 26)

WEATHER FORECAST—
HEAVY SMOKEFALL

SMOKE exerts a definite influence on the weather at this season by reducing the amount of sunlight. Beginning in September there is a steady rise in atmospheric pollution until in December it becomes double that of midsummer, according to a recent report of a two-year study made by the U. S. Public Health Service in ten of the largest American cities, representing a population of millions. One of the most surprising findings was that there is no decrease in the dust content of the air either during or after a rain.



Average atmospheric pollution in 10 large American cities, 1931-1933. In many smaller communities, even worse conditions may prevail under any of the following combinations: (1) soft coal, (2) low inland wind velocity, (3) concentrated manufacturing activity, (4) no zoning regulations, (5) no smoke abatement ordinances.

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(Continued from Page 24)

victed on three of the nine counts. Dr. Valentine St. John and John Creeth, the latter a Medical Acceptance Corporation official, were found guilty on two of the nine charges. Mrs. Jessie Radcliffe, who convinced the jury she was unfamiliar with the organization's purposes during her two weeks' employment in the Long Beach clinic, and J. C. Perry, who accepted a position with the Finance Company just before his arrest, were acquitted on all counts. . . ." (Los Angeles *Examiner,* October 25, 1936.)

"Superior Judge Arthur Crum today denied applications for new trials filed by eleven persons convicted in the illegal surgery ring trial and sentenced six of the eleven to San Quentin Prison for terms ranging from four to twenty-five years. The other five, including three women, were granted permission to file applications for probation and November 16 was set for the probation hearings and the pronouncing of sentences. All the defendants announced intention of appealing their convictions voted by a jury October 24. R. L. Rankin, who, the prosecution contends, was business head of the asserted coast-wide illegal operations organization; William A. Byrne, former special officer of the State Medical Board; Dr. George E. Watts, Dr. Jesse Ross, and Dr. James Beggs, each convicted on five counts, were sentenced to terms of from ten to twenty-five years each. Dr. Valentine St. John, convicted on two counts, was sentenced to a term of from four to ten years. Those permitted to file probation pleas were J. O. Shinn, John Creeth, Grace Moore, Lillian Wilson, and Viollette Pelligrini." (San Francisco *Chronicle,* November 3, 1936.)

"Dismissal of many of the thirty-one San Francisco indictments in the sensational coast-wide illegal surgery case, may result from a conference here today between Deputy District Attorneys Vernon Ferguson of Los Angeles and J. J. McMahon of San Francisco. McMahon, especially assigned to Los Angeles for the trial of thirteen defendants in the case, which resulted Saturday in the conviction of eleven and the acquittal of two, said all but three or four of the San Francisco accused may be freed of charges there. The dismissals would include the thirteen defendants in the Los Angeles hearing and alleged operators for the ring who turned State's evidence and

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testified here, as well as a number whose connection with the organization was slight. . . ." (Los Angeles *Examiner,* October 26, 1936.)

"Making an eloquent plea for clemency, Dr. W. Norman Powers, Seattle physician, who recently pleaded guilty to conspiracy to violate the law in respect to illegal operations, yesterday was granted probation by Superior Judge Crum. . . . The probation calls for the serving of six months in the county jail as part of a three-year probationary period, during which he shall not practice medicine. Eight other counts against him were dismissed by the court on motion of Deputy District Attorney Ferguson. . . . The office of the District Attorney pointed out that Doctor Powers came to California at his own expense and pleaded as one of the minor defendants, saving the State considerable expense. Before granting the probation Judge Crum imposed the San Quentin sentence, which he suspended on condition of the jail sentence and the other stipulations. The doctor is privileged to leave the State after serving of the jail sentence. Application of Dr. Jesse C. Ross, convicted on October 24, last, in connection with the asserted illegal operation ring, for bail, pending his appeal, was denied yesterday by Judge Crum. Doctor Ross was sentenced to San Quentin on five counts after a jury returned a guilty verdict against him and ten others." (Los Angeles *Times,* November 10, 1936.)

"A woman witness called before the State Board of Medical Examiners in its trial of Dr. Thomas D. Wyatt of Redding on abortion charges today, faces legal action for refusal to testify. The woman is Mrs. Arsilia Briegel of McCloud, who declined to make any statement on ad-

(Continued on Next Page)

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★ *Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245*
Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154
N. Y. State Jour. Med., June 1935, Vol. 35, No. 11
Arch. Otolaryngology, Mar. 1936, Vol. 23, No. 3, 306-309

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

vice of counsel. Immediately after the Wyatt hearing was adjourned (until the next meeting of the Board in Los Angeles in February), Lionel B. Browne, Deputy Attorney-General, who was prosecuting the case, said he would cite the record to the Superior Court in a move to force Mrs. Briegel to testify at the February meeting. . . ." (Sacramento *Union*, October 21, 1936.)

"Dr. Arthur M. Tweedie, arrested by police a week ago, yesterday was exonerated by the county grand jury with any connection with illegal surgical activities. The jury heard several witnesses before ordering Doctor Tweedie's release from bail. According to Deputy District Attorney Whichello, the physician was seized on suspicion as the result of the mention of his name in statements made by witnesses during the recent trial of several illegal operation 'specialists.' Testimony discloses that Doctor Tweedie had no connection with members of the illegal operations 'ring,' a number of whom were convicted and sentenced to prison, Whichello stated." (Los Angeles *Examiner*, November 11, 1936.)

"Dr. George W. O'Donnell, San Francisco physician, today had been granted a Writ of Review in Superior Court here, of the recent action taken by the State Board of Medical Examiners in revoking his license to practice." (Press dispatch, dated Sacramento, November 10, and printed in the Los Angeles *Examiner*, November 11, 1936.)

"A job almost any man would like to have went today to Dr. E. W. Laisne, Fresno. Laisne, an eye specialist (licensed optometrist), was appointed a member of the Directorate of the Elysium Nudist Colony cult here."

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(United Press dispatch, dated Alma, California, October 29, and printed in the Los Angeles *Illustrated Daily News,* October 30, 1936.)

"Eugene J. Rinaldo, fifty-one years of age, yesterday pleaded guilty to practicing medicine after his license was revoked and asked for probation, hearing on which was set for Monday by Municipal Judge Landrath. According to Deputy City Prosecutor Crandall, Rinaldo treated a patient for arthritis last July, charging a fee of $54. His license was revoked October 18, 1932, Albert Carter, State Medical Inspector declared." (Los Angeles *Times,* October 29, 1936.)

"Promising an exhaustive inquiry, Coroner T. B. W. Leland today reopened an inquest into the death of Mrs. Martha Kaufman, who died November 9, 1929, assertedly from a criminal operation, which was officially hushed. In court, as the session opened, were persons Attorney H. R. Hubbard described as 'prominent in the abortion business in San Francisco.' . . . Also waiting to testify were Mrs. Minerva Geddes Sissons and her sister, Mrs. W. L. Swindell, since arrested on charges of performing an abortion at 1115-1117 McAllister Street, where Mrs. Kaufman died; Dr. A. A. Berger, who signed the autopsy report of death by natural causes." (San Francisco *News,* October 29, 1936.)

"The jury trial of Frederick Mazain on four counts for practicing medicine without a license ended abruptly yesterday when Mazain withdrew his plea of not guilty to one of the charges and pleaded guilty, and had the other three dismissed by Justice Grandin H. Miller. The motion for the dismissal of the charges was made by Deputy District Attorney A. Andreuccetti, who was prosecuting Mazain. The complaint against Mazain was signed by Thomas P. Hunter, inspector of the State Medical Board.

(Continued on Next Page)

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

On the count to which he pleaded guilty Mazain was granted probation for two years and ordered to refrain from practicing medicine as a condition of probation." (San Jose *Mercury-Herald,* November 5, 1936.)

Albert Carter, Special Agent, Board of Medical Examiners, reported that Clifford Pickett, colored former janitor in the Venereal Disease Clinic of the Los Angeles City Health Department, was arrested on October 29 on a charge of violation of Section 17 of the Medical Practice Act, trial being set for November 24, and defendant confined to jail because of his inability to raise bail. According to the complaining witness, Pickett assertedly met his patients outside the clinic, induced them to visit his home in the evening and gave them hypodermic injections of salvarsan.

Recent report was filed with the Board of Medical Examiners that an individual giving the name of Ackerman, claiming to be from New York, was traveling about the State calling on doctors, offering to purchase samples of drugs and medicines which had been sent them by various drug houses. These, he said, he sent back to New York and sold them to druggists.

"William Byrne, at the time an enforcement officer of the California State Board of Medical Examiners, used his official power in 1935 to force Mrs. Laura Miner of San Diego to join the alleged coast-wide illegal surgery ring. R. L. Rankin, reputed business genius of the alleged tri-state organization, in November, 1934, boasted openly to an official of the Board that he intended to operate a large-scale illegal operations business, with such strong legal advice and protection that the law could not interfere. Two witnesses gave this sensational testimony yesterday in the trial of fourteen alleged members of the million-dollar syndicate—Mrs. Miner, herself, and Dr. Charles B. Pinkham, for twenty-three years secretary of the State Medical Board. After Doctor Pinkham had told of Rankin's alleged boasts, Mrs. Miner described how she paid $1,000 monthly tribute to the purported ring through the 'purchase' of the organization's San Diego Clinic, after Byrne had forced her to relinquish her own illegal operations business there. . . . Doctor Pinkham, questioned by Deputy District Attorney John J. McMahon of San Francisco, said Rankin called on him in San Francisco in November, 1934, with a protest against the complaints which had been received by the Board concerning the professional methods of Dr. George E. Watts, alleged medical chief of the ring, who at the time was moving his clinic from Oregon to California. 'Rankin told me,' Doctor Pinkham said, 'that he had learned the names of most of the large-scale illegal practitioners on the West Coast through his work as an income tax expert. I asked him if he contemplated establishing an illegal operations office in San Francisco. He said frankly that he was negotiating for one. I told him the State Medical Board existed to enforce the Medical Practice Act and that we knew cards were being distributed widely to advertise illegal operations and that we had heard solicitors were in the field seeking business from druggists and doctors. He replied that he and his associates had the best of legal advice and had no fear of successful prosecution by the Board. He added that he was purchasing a great many medical practices and was placing the offices under charge of young doctors, with instructions not to perform operations themselves, but to send cases to clinics maintained elsewhere.' The witness concluded that the law required doctors to list changes in their addresses, but that the reputed Rankin-Watts combine apparently changed surgeons and transferred licentiates from one to another so rapidly that the Board could never be sure of the location of any of them. Mrs. Miner identified for McMahon and Deputy District

(Continued in Back Advertising Section, Page 34)

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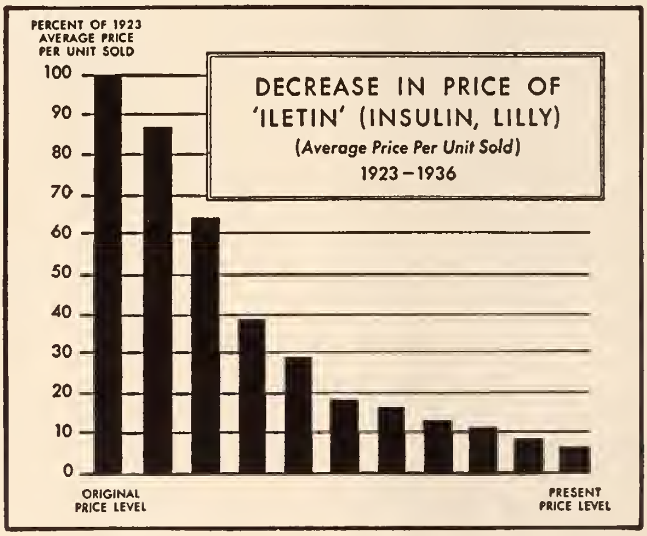

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EDITOR . . . . GEORGE H. KRESS

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Contributions—Length of Articles: Extra Costs.—Original articles should not exceed three and one-half pages in length. Authors who wish articles of greater length printed must pay extra costs involved. Illustrations in excess of amount allowed by the Council are also extra.

Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

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EDITORIALS[†]

THE SEASON'S GREETINGS

The eve of a biennial legislative session in California, with potentialities of untoward public health legislation, makes good wishes for Christmas and New Year days particularly appropriate. If the year 1936, now coming to a close, meant to many members of the Association another twelve months during which professional services again and again were rendered on reimbursement schedules far too meager for the needs of professional life, it may still be consoling, small though the comfort be, that conditions might have been worse. With the national election now a thing of the past, it looks as if the country will settle down to sober, earnest acceptance and trial of some of the newer social endeavors, emphasized so much in recent years, and which, in many instances, are associated more or less with medical practice. Therefore, at the end of the current year and the beginning of the year to come, it may be permissible to breathe the hope of better days and better things.

No business or profession comes into more intimate contact with the trials and tribulations of citizens than medicine. Of necessity, physicians must partake of the joys and sorrows of their patients and, in good degree, prosper or suffer with them. However, in the United States—and certainly in California—there are many things for which to be grateful and hopeful.

In the spirit, then, of mutual helpfulness, the Official Journal, in accordance with past custom, extends again to their fellow physicians, in the name of all members, the Greetings of the Season. May 1937 measure up most fully to our respective needs, good hopes, and desires! Greetings!

HOSPITALIZATION PLANS IN CALIFORNIA

The Physician-Patient Relationship in Medical Practice.—In contrast to other modern-day life, the practice of medicine up to the present time has had as one of its basic characteristics the element of individualization; meaning thereby that the person who is sick or injured does not seek any or a number of physicians, but nearly always a certain physician to take charge of his case; the service in each instance again emphasizing personal, namely, individual medical supervision. The average American citizen, and his family also, when illness or injury come, do not want a mass of advice from a multitude of doctors of medicine, or from a doctor chosen haphazard or at random, but seek, by preference, the individual opinion and service of the one physician whom he and his family and friends have selected, and in whom they have confidence. This interesting patient-to-physician relationship is not a matter of mere custom or habit, but an expression of basic feeling and psychology in evidence among sick and injured persons, from one end of the country to the other. It is typical of American thought and living.

[†] Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column, which follows.

* * *

Relationship Important in Hospitalization and Medical Service Plans.—Because this physician-and-patient relationship is such a spontaneous and fundamental phenomenon, it must be taken into serious consideration in all plans having to do with medical service in home or hospital. Especially, must this basic correlation never be lost sight of in plans designed to bring greater or more adequate service to portions of the lay population; many of whose members, under modern-day conditions, must face heavy economic and other problems in their efforts to maintain intact the protection and advancement of their family groups.

* * *

Seeming Inability of Mechanization Theorists to Understand.—Theorists and propagandists, who, looking through glasses of their own construction, see only certain phases of illness and the economic problems connected therewith, only too often fail to recognize the important significance of the individualization factor in successful medical practice; propounding their paper theories with self-assurance and satisfaction, and giving the impression at times that they imagine themselves to be modern-day oracles on these matters, when, as a matter of fact, they are not infrequently little more than academic idealologists. In this oracular atmosphere, created by themselves, they do not hesitate to outline and dogmatize on what physicians must do in the present-day world; how they must change their methods of practice, and along what lines their course must be laid for the days to come! Much of the medical service propagandism, as exploited by certain of these lay theorists, comprehends a regimentation and mechanization of medical practice, equally obnoxious to the American patient and the American physician.

The one-sided thinking of some of these visionaries is shown not only in their seeming incapacity to understand how plans leading to mechanization in healing-art care will necessarily produce a lower type of medical service, but also in their overemphasis and exaggerations concerning the vast number of lay fellows in our midst who are supposedly suffering permanent injury from lack of a more universal method of placing physicians on call to all classes of citizens. These thoughts are here presented, as more or less pertinent to what will appear below concerning hospitalization plans in California.

Hospitalization Organizations Now in Operation in California.—At the present time, The Intercoast Hospital Association is giving hospitalization service in the Sacramento Valley and adjacent territory, and in Alameda County, members of the Alameda County Medical Association have also sponsored an hospitalization organization. Each corporation, operating as a nonprofit insurance organization, has been obliged to set aside $25,000 as a protection reserve to clients, and to fulfill other conditions designed to protect policyholders, as laid down by the State's Insurance Commissioner. In Los Angeles and adjacent counties, plans are also in formulation to bring into being a hospitalization system, in this instance, however, to operate as a nonprofit corporation under Assembly Bill 246[*]; and unless legal technicalities prevent, this Southern California plan may be in operation before the close of the year. Under Assembly Bill 246 for nonprofit hospitalization service, the $25,000 requirement is not obligatory. In Southern California more than twenty-five hospitals have signified their acceptance of the plan proposed.

The above plans comprehend hospitalization service on a periodic prepayment basis, the premiums to be paid being such as are within the means of citizens in moderate circumstances. It is to be hoped that the three groups above noted will be successful in their work, and that their areas of service will be extended to practically all portions of the State, where local communities do not themselves promote similar organizations.

* * *

"High Costs of Medical Care" are the "High Costs of Hospitalization."—Many physicians hold that the economic shocks of serious illness and injury, concerning which some of the compulsory health advocates prate so much, have to do, not so much with the fees of medical men and women, as with the heavy expenses incident to hospital care. Therefore, all plans which on a periodic prepayment basis make it possible for citizens of moderate income to protect themselves against this contingency, just as they protect themselves through fire insurance policies, automobile insurance, and health and life policies, would seem to be worthy of earnest consideration and support. Of course, certain matters having to do with clinical laboratory and x-ray service, which today are everywhere accepted and demanded as concomitants of hospitalization, may need satisfactory adjustment; but the difficulties in regard thereto should not be insurmountable.[†]

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[*] Assembly Bill 246 was discussed in previous issues:

Editorial — Assembly Bill 246; For Nonprofit Hospital Service, Vol. 43, No. 2, August, 1935, page 107.

American Medical Association and Health Insurance Principle, Vol. 43, No. 2, August, 1935, page 175. (Special article in Miscellany department.)

Editorial—Assembly Bill 246—Chapter 386: The Nonprofit Hospital Service Bill, Vol. 43, No. 4, October, 1935, page 249.

[†] As the copy for the December issue is being prepared for the press, an interesting news release is received from the Julius Rosenwald Foundation of Chicago, which announces a gift of one hundred thousand dollars ($100,000) to the American Hospital Association for the study and development of voluntary hospital insurance. The item is printed in this issue on page 519.

Action of the California Medical Association: Coöperation Should Be Given.—In this issue of the Official Journal appear * the minutes of the meeting of the California Medical Association Council held in San Francisco on November 7 last, and reference is made therein to hospitalization plans then discussed. Members of the Association are urged to read the same and to maintain an active interest in the efforts to promote satisfactory hospitalization plans in California, and to give whole-hearted coöperation to approved groups. It will save much discussion and worry, in January of next year when the California Legislature again meets, if successful hospitalization plans can be pointed to as actually being in operation over most of the State.

COUNCILOR DISTRICT MEDICAL SOCIETIES: SHALL CALIFORNIA ORGANIZE THEM?

The American Medical Association Plan of Thirty Years Ago.—When, more than thirty years ago, the New England town-meeting form of organization of the American Medical Association was changed into its present order, there came into being for organized medicine one strong national organization, one and only one constituent state association for each commonwealth, and one and only one component society for each county in the United States. Many have been the benefits which have accrued as a result of that reorganization; because, for the first time, the American Medical Association found itself able to amass property and reserve funds (largely through the net income derived from its Journal), making possible, for instance, research councils and departments to aid in the promotion of public health and medical service plans. In a similar manner, the state medical associations took on new leases on life and also, for the first time, began to fulfill analogous functions in their respective territories. For instance, in California, so recently as the year 1900, the State Association—then known under the name "Medical Society of the State of California"—was largely a northern California district organization, the Southern California Medical Society being almost as large and influential in the region south of the Tehachapi. In a number of the larger counties, not one, but two or more additional societies vied with the county organizations in bids for support.

* * *

Good Results of the Reorganization.—The reorganization in 1902 changed all that in California, because, as each county society grew in numbers and influence, so also did the State Association add to its growth and power to serve.

Because of the beneficent results which came about in the 1900-1903 reorganization plans, the medical profession of the United States is today committed to the one strong national organization, one strong state association, and one strong component county society plan; and it may be taken for granted that the American Medical Association is not apt to change its constitution and by-laws to permit a return of multiple organizations, with all their attendant looseness and deficiencies, such as existed in the prereorganization years.

* * *

"Councilor District Societies." — However, there is nothing in the organization plan of the American Medical Association and its constituent state associations that forbids the organization of "councilor district societies," and in a number of states such district organizations have long received active support and have done much good work.

By a "councilor district society" is meant the organization by the counties comprising a councilor district, of a society with an independent identity, but acting in harmony with the state association, as a recognized part of it. A district society may hold annual or semi-annual sessions at places within its territory; at times by it selected. It has its own officers and its sessions last one or two days. Ordinarily, the business meeting is quite brief, and limited to the election and reports of officers and committees. The programs are modeled, in a general way, after those of the state organization, and may stress didactic or clinical expositions, according to conditions. In California two organizations of practically a district type, the Southern California Medical Society and the California Northern District Medical Society (listed on advertising page 6), for years have been carrying on most commendable work.

* * *

How a Councilor District Society Can Serve. Our purpose in writing these lines is to call attention to the following facts: that California is one of the largest states in the Union; that, on that account it is difficult for many members of the California Medical Association to leave their work to attend its annual sessions; that district associations would fulfill a similar function for such members and would promote county society membership and activities in every such district; that such district societies, in a one- or two-day session, could be supplied with clinical demonstrations from their own and extra-district localities, thus aiding the postgraduate work of the State Association; that every district society could be made to be of great value in promoting good fellowship and understanding between the members of the county societies included; and that the community problems of each district territory, such as county hospital and other conditions, could be better solved for such a territorial district if the adjacent counties had opportunities, through a district society, to bring their physicians into more intimate professional and fraternal contacts, and the exchange of views and adoption of policies.

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* See Council minutes, page 502, items 6 and 12.

Should Not Councilor District Societies Be Promoted in California?—As a matter of fact, if properly organized along simple lines, with skeleton by-laws approved by the California Medical Association Council, and working in full harmony with the State Association and its component societies, a councilor district organization could be made to be one more additional—and with good leadership, a powerful—factor in keeping before the lay public the objects scientific and organized medicine believe in and hope to attain. We suggest that county societies consider the implications involved in a district society for their respective councilor district. Officers of the Association will be glad to give advisory and other aid. If each of the nine councilor districts had such an active organization, the influence and capacity for greater service by the California Medical Association and its thirty-nine component county societies would be largely increased.

STATE ASSOCIATION DUES

Action of the 1936 House of Delegates.—At the annual session of the California Medical Association, held in Coronado on May 25-28, 1936, the House of Delegates approved the recommendation of the Reference Committee that, for the year 1937, the dues of the State Association be increased by $5. The vote by the House of Delegates on the Reference Committee's recommendation was unanimous, not a single one of the more than one hundred delegates, representing the thirty-nine component county societies, asking any questions or making any protest. This unanimity was not to be interpreted as an expression of indifference on the part of the delegates concerning the hardship that might be caused by the five-dollar increase in State Association dues, but rather as a recognition by the seated members concerning the issues confronting the medical profession at the present time—issues which are so vital to the interests of each member that, even though it might hurt to give, there was no other logical course to follow, if the collective and individual welfare of members of the Association were to be adequately safeguarded during the coming legislative year.

* * *

Reasons for the Increase.—Owing to the heavy outlays incurred as a result of the mandatory health insurance survey authorized by previous Houses of Delegates in regular and special sessions, the reserves in the Association treasury have been greatly depleted, and a reëstablishment of an adequate treasury balance seemed necessary.

With a legislative session in the foreground for the year 1937, it may be taken for granted that attempts will again be made to launch health insurance and open-county-hospital legislation upon the citizens of California. As a matter of fact, copies of certain proposed bills drafted by lay and unknown sources have already been placed in circulation and propagandized.

It is not possible to forecast in advance how much effort and time may be necessary to keep in touch with the progress of such proposed legislation, as it takes its course through assembly and senate committees and on the floors of the chambers, but that it will need constant surveillance is self-understandable. Also, that the work is so onerous and time-consuming, that members of the Committee on Legislation and Public Policy cannot be expected to neglect the personal practice of their profession to render gratuitously, or otherwise, the full service which will be necessary. The costs of the clerical and executive personnel which the Association is called upon to engage, to look after work of this kind, are not inconsiderable items.

* * *

Interests at Stake.—It is true that one should rebel against expenses of this type, brought into existence through the desire to safeguard public health and medical practice standards, but academic discussion would only lead to disaster; and make possible, in all probability, the enactment of poorly matured legislation that might not only mean a monetary loss to every California Medical Association member of many, many times the five-dollar increase in dues during the coming year, but which in future years might bring about radical and demoralizing changes in medical practice in California; with financial and professional retrogressions, at this time difficult to even visualize.

* * *

Increase for One Year Only.—Matters such as the above, as well as other responsibilities of the Association, explain the unanimous approval by the Coronado annual session delegates of the five-dollar increase in dues for 1937 which, it is hoped, will not be necessary in the subsequent years; and which could only be continued with the sanction of the delegates elected by the component county societies. So that, in the last analysis as in the past, the component societies, through the delegates which they elect, will have full power in the premises, so far as State Association dues in future years are concerned.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 502.

Our chief enemies at present are heart disease, cancer, pneumonia, tuberculosis, and syphilis. If the full facts are known, as Doctor Osler said, syphilis would probably come first. Syphilis is the biggest killing disease in the community. It and tuberculosis are undoubtedly the greatest present contributors to the total mortality prior to the approach of old age. By the removal of tuberculosis and syphilis, most of the preventable deaths from the age of 15 to 65 would be avoided.—Sir Arthur Newsholme, M.D.

EDITORIAL COMMENT[†]

CAPILLARY RESISTANCE

Two methods have been applied in the study of capillary resistance. In the earlier method introduced by Rumpel and Leede, a constricting band is applied to the arm for a period of time, and the occurrence of petechiae in the arm distal to the band (particularly in the cubital fossa) is noted. Göthlin[1] recently applied this method in a controlled manner in studying the occurrence of latent scurvy in school children in Sweden. The method as applied by Göthlin is a reliable index of capillary resistance, but is cumbersome and time-consuming.

In the second method, originated by Hecht,[2] a negative pressure is used applied to the skin through a suction-cup combined with a mercury manometer and a vacuum pump. Hecht used the test chiefly in exanthema. Wiemer[3] applied the method extensively, noting the variability of capillary strength in different skin areas and in various pathological states. He considered that different influences might reduce the capillary strength by injuring the capillary wall. Among these were certain poisons, bacterial toxins, metabolic products and, of course, vitamin C deficiency. Further certain physiological states, as menstruation and endocrine disturbances such as exophthalmic goitre, were thought to reduce the capillary strength by their influence upon capillary tonus.

Recently Dalldorf[4] modified an instrument devised by da Silva-Mello,[5] in which a spring manometer was substituted for a mercury instrument. It is this instrument which we have used. The test is simple. A surface of skin is thinly smeared with vaselin, the cup is applied and the desired suction made. This negative pressure is maintained for one minute by closing a valve leading from the pump. Our application of the test has been chiefly in rheumatic fever and rheumatoid arthritis, diseases in which we feel a factor of vitamin C deficiency may be concerned.[6] In these diseases we find the capillary strength reduced. In most instances the capillary strength has risen in cases maintained on a high vitamin C intake. This rise has often required several months, indicating a delayed restitution of the capillary wall. The capillary resistance is expressed in terms of the lowest negative pressure (centimeter of mercury), maintained for one minute, which will produce macroscopic petechiae. Although the test may be an index of latent scurvy as proposed by Dalldorf, there are certain limitations of the method. As he has noted, there are unexplained individual variations encountered, and undoubtedly other factors which impair capillary walls may reduce the capillary resistance. It may be that in some diseases vitamin C deficiency may be a contributory and not the sole factor in reducing the capillary resistance. However, an estimate of the strength of the capillary wall is of potential service in the study of disease. This is particularly true if the capillary strength proves to parallel permeability. Dalldorf has set the "normal" level of capillary resistance at 35 centimeters of mercury in testing the upper arm. We feel that the test should not be interpreted too narrowly. Positive readings below 20 centimeters of mercury we consider evidence of reduced capillary strength. In some instances such reduction appears to have no significance. Our tests have been done on the volar surface of the forearm in some cases, and the upper arm in others. The upper arm readings are almost uniformly somewhat lower. It would seem that a modification of the test might be of value in detection of latent edema.

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[†] This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

[1] Göthlin, G. F.: A Method of Establishing the Vitamin Standard and Requirements of Physically Healthy Iindividuals by Testing the Strength of Their Cutaneous Capillaries; Skandinav. Arch. f. Physiol., 61:225 (May), 1930.

[2] Hecht, A. F.: Experimentell-klinische Untersuchungen über Hautblutungen im Kindersalter, Jahrb. f. Kinderh., 65:113, 1907.

[3] Wiemer, P.: Das Endothelsymptom, Ztschr, f. d. ges. expr. Med., 78:229, 1931.

[4] Dalldorf, G.: A Sensitive Test for Subclinical Scurvy, Am. J. Dis. Child., 46:794, 1933.

[5] da Silva-Mello, A.: Capillar-Resistometer, München. med. Wchnschr., 41:1717 (Oct. 11), 1929.

[6] Rinehart, J. F., and Mettier, S. R.: The Heart Valves and Muscle in Experimental Scurvy with Superimposed Infection, Am. J. Path., 10:61 (Jan.), 1934.

—Rinehart, J. F., Connor, C. L., Mettier, S. R.: Further Observations on Pathological Similarities Between Experimental Scurvy Combined with Infection, and Rheumatic Fever, J. Exper. Med., 59:97 (Jan.), 1934.

—Rinehart, J. F.: Studies Relating Vitamin C Deficiency to Rheumatic Fever and Rheumatoid Arthritis; Experimental, Clinical, and General Considerations. I. Rheumatic Fever, Ann. Int. Med., 9:586 (Nov.), 1935.

—Studies Relating Vitamin C Deficiency to Rheumatic Fever and Rheumatoid Arthritis; Experimental, Clinical, and General Considerations. II. Rheumatoid (Atrophic) Arthritis, Ann. Int. Med., 9:671 (Dec.), 1935.

VITAL CAPACITY DETERMINATION: WITH PARTICULAR REFERENCE TO ITS VALUE IN HEART DISEASE

Borelli first measured the vital capacity of the lungs in 1679. It was studied intermittently after that until a truly scientific study of results on 3,000 people was published by Hutchinson in 1846.[1] His paper marked the beginning of the present epoch in the history of the test. During the World War an easy method for the estimation of physical fitness of large numbers of men was needed and vital capacity was frequently used as an indicator. Dreyer[2] reported this work and pointed out that it was a decisive factor in admission to the British Flying Service. After the war the center of interest shifted to America, due largely to the work of Peabody and Wentworth[3] in Boston. Since that time the test has been the subject of extravagant claims and severe criticism, but certain definite values have allowed it to survive both extremes of thought.

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[1] Hutchinson, J.: Medico-Chirurgical Transactions, 29:137, 1864.

[2] Dreyer, G.: Lancet, 2:227, 1919.

[3] Peabody, F. W., and Wentworth, J. A.: Arch. Int. Med., 20:443, 1917.

FACTORS THAT INFLUENCE THE VITAL CAPACITY

These are, of course, important in judging the value of the test.

1. *Age.*—Children less than adults; definite tendency to drop after the age of 50 to 60.
2. *Sex.*—Slight difference in early years, and a definite difference after the age of 15. Men are higher than women.
3. *Physical Fitness.*—Athletes may be 100 per cent more than their theoretical normal. Occupations have an effect, and laborers have much greater vital capacities than office workers.
4. *Body Measurements.*—Weight, height, stem length, chest circumference, chest capacity, and body surface all affect the vital capacity. The most satisfactory standard tables are calculated from body surface.
5. *Race and Nationality.*—Chinese and Filipinos lower than Westerners.
6. *Posture.*—Results are about 5 per cent lower with the patient reclining than when standing.
7. *Pulse.*—Increased rate causes a slight decrease, more marked in definite heart disease.
8. *Muscular Fatigue.*—Causes slight decrease.
9. *Hyperthyroidism.*—Decrease has been reported, more marked with cardiac involvement.
10. *Increased Abdominal Pressure.* — Pregnancy has only an occasional slight effect.
11. *Deformities of the Thorax.*—Fixation or encroachment upon the intrathoracic space has a definite effect.
12. *Pleural and Pulmonary Conditions.*—Pleurisy, pneumothorax, emphysema, asthma, bronchitis, lung abscess, pneumonia, new growths and tuberculosis all definitely lower the vital capacity.
13. *Cardiac Conditions.*—These have a marked effect, as discussed below.
14. *Extraneous Factors.*—Psychic factor important, as concentration and utmost effort are necessary. Temperature, atmospheric pressure, and vapor pressure all have slight effect.

CARDIAC CONDITIONS

Vital capacity determinations are of particular help in following the progress of cardiac patients. Reduction closely follows the clinical condition, and occurs before râles can be heard at the lung bases in congestive failure.

Repeated determinations are of the greatest value and show (1) impending failure, (2) effect of treatment, (3) point of maximum response to treatment, and (4) possible indications of the level of cardiac tolerance. There is a marked correlation with dyspnea. In "effort syndrome" the vital capacity is usually normal.

METHOD

Tables of normal standards calculated from body surface are considered the most reliable, except in extremes of emaciation or obesity. The calculation is as follows: Body surface (sq. M.) × 2,500 = estimated vital capacity in cubic centimeters for men. Body surface (sq. M.) × 2,000 = estimated vital capacity for women. The body surface can be easily determined from the patient's height and weight, using charts prepared by Boothby and Sandiford.[4]

The test is performed with the use of a spirometer which measures the amount of exhaled air. The patient is always in the same position (usually standing), all clothing about the thorax is loosened, and three attempts are made, each after the deepest possible inspiration. The highest reading is recorded.

Most of the points in this article are adequately discussed in a monograph by Myers[5] which also contains a complete bibliography.

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[4] Boothby, W. M., and Sandiford, E. B.: Boston M. and S. J., 185:337, 1921.

[5] Myers, J. A.: Vital Capacity of the Lungs, Williams and Wilkins Co., Baltimore, 1925.

Report of British Medical Association on Immunization.—More than a year ago, the British Medical Association appointed a committee, consisting mainly of health officers and pathologists, to prepare a scheme for informing the public regarding the protection afforded by the various methods now available of immunization against diseases.

Diphtheria.—The committee states that diphtheria is not less prevalent than formerly, but is less fatal. Isolation and sanitary measures have failed to control it, and it accounts for three thousand deaths annually. Active immunization is confidently advocated. In children under the age of eight years the preliminary Schick test may be omitted, since the great majority may be assumed to be susceptible, but as a test of success should be performed from one to three months after the immunizing course. For children any of the preparations known as toxoid, toxoid-antitoxin mixture, toxoid-antitoxin floccules and alum toxoid may be safely used, but for adults preference is expressed for toxoid-antitoxin mixture or floccules. On the average, 95 per cent of immunized persons are still Schick-negative from three to five years after immunization.

Scarlet Fever.—Scarlet fever still presents difficulties in preventive medicine. The death rate has fallen remarkably, although the incidence has altered little. The Dick test is held to be very reliable. Immunization should at present be reserved for hospital staffs and children in a residential school where an outbreak has occurred. Two methods of immunization are used: (1) In England most workers use weekly or fortnightly injections of 500, 1,000, 5,000, 10,000, and 20,000 skin test doses. (2) In recent years the tendency has been to use a higher dose. In the United States the Dicks and others give doses running up to 80,000 or 100,000. By slow graduation of dose, reactions may be almost entirely avoided. Probably from 2 to 10 per cent of the immunized revert to the Dick-positive state within a year.

Measles.—Passive immunity to measles can be produced by the use of convalescent serum or blood and by adult serum or blood. It may be used for postponing the danger of infection to a more opportune time or for mitigating the attack. Convalescent serum is the material of choice and should be given in the first five days after exposure for complete protection. Administration between the fifth and ninth days, or half dosage during the first five days, is used for modifying an attack.

Typhoid.—The work of Wright and Leishman during the war resulted in the production of a typhoid vaccine widely and successfully used. In the years that have followed, modifications have been introduced into the technique of manufacture. Saline suspensions have replaced broth emulsions. Work in the department of pathology at the Army Medical College has resulted in the production of a vaccine containing 1,000 million B. typhosus, 750 million each of B. paratyphosus A and B. paratyphosus B in 1 cubic centimeter of 0.5 per cent phenolated saline solution. Adults are given 0.5 cubic centimeters after ten days by 1 cubic centimeter.

ORIGINAL ARTICLES

PRACTICA MEDICI MODERNI*

By Chauncey D. Leake, Ph.D.
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When Dr. Fletcher Taylor, the genial chairman of the 1936 Section of General Medicine of the California Medical Association, persuaded me to discuss with the Section some non-technical aspects of modern medical practice, he failed to tell me that he was relinquishing his traditional prerogative of delivering a chairman's address in order that I might talk. To admit surprise is to admit only the mildest of my feelings on discovering this fact when the program of the meeting appeared. Here was a humbling example of that very modesty, trustfulness, and friendliness which Doctor Taylor had suggested might form an appropriate theme of part of my remarks. I am excitedly conscious and stammeringly embarrassed by the responsibility placed upon me. But there is no greater obligation imposed on our conduct than for us to try to justify the confidence others may place in us. However vagatonic, therefore, my trial may be, I hope it may have your sympathetic indulgence.

FOUR IMPORTANT FACTORS IN MEDICAL PRACTICE

In looking broadly on the practice of modern physicians through appreciative and academic eyes—slightly astigmatic, I fear—I have been struck by four formidable features which I wish to offer for your consideration; three of them as old as medicine, the fourth very new. First, there is the ancient problem of holding together for effective teamwork that spirited and often poorly harnessed pair, the scientific and the artistic phases of practice; second, there is the equally ancient problem of developing medical etiquette in accordance with sound ethical principles, in which I wish to point out that professional relations are most satisfactorily promoted on the basis of gentlemanly friendship; third, we must pay our respects to the revival of another ancient medical problem regarding intense specialization; and, fourth, we should consider the consequences of a wholly new medical problem associated with the rise of sound and applicable methods of preventive medicine, in regard to which I want to suggest a way by which a practical incentive may be provided for its effective practice. Here is enough to chew over for a long time, and it is tough meat. But by pulling in our belts, we may strengthen our stomachs to digest it. If we get a bellyache, Doctor Taylor has brought it upon us.

ART IS LONG

Modern medical practice is sharpening the focus on the traditional but not always convivial union of science and art in medicine. The art of medicine has predominated until recently. But now the scientific part of the team has almost run away with the wagon, and it is time to pull in the reins and get the team working together again. The scientific part of medicine consists of the factual data accumulated by observation, experience, and experiment regarding the cause, recognition, natural course, treatment, possible outcome, and prevention of disease. The artistic part of practice lies in the application of this knowledge to the special problem offered by an individual patient in the effort to bring into or preserve that patient in the ideal state of health conceived for him by the physician. About the factual knowledge there is no argument. It is observable or reproducible. The data may be explained in various ways, but the facts remain the same, irrespective of anyone's opinion. But the artistic effort is entirely individual, and although all physicians are artists, no two physicians will solve the same artistic problem in the same way any more than two musicians will play the same composition in the same way, or two painters paint the same scene identically. Styles may be similar. They are conditioned by the fashions and vogues of the moment. But the essence of art is judgment and choice. The soundness and effectiveness of this procedure for a desired end is acquired only by long experience. Most of the science of medicine may be learned in the four years of medical school, but the rest of a physician's life may still find him deficient in the art. The first aphorism of a leader of a great school of medicine is to the effect that art is long and life is short.

We may find an easy illustration of the problem in connection with drugs—that is, chemicals used for the diagnosis, prevention, cure, or alleviation of the symptoms of disease. The actions of these chemicals may be determined with a considerable degree of accuracy, now that we have sound bioassay methods as developed by Trevan and Burn. About these demonstrable actions there is no argument. They remain factual in spite of how they may be explained, or in spite of what anyone may think of them. But to apply these actions to a specific problem in connection with an individual patient—this calls for judgment and artistic skill of a high order! Judgment in any artistic problem is a matter of discriminating choice. This can only be developed by long experience. To use drugs wisely in medicine demands such judgment. The primary principle, of course, is to be sure that the drug hazard does not outweigh the disease hazard, no matter for what purpose the drug may be used. *Primum non nocere* remains now, as in centuries past, a cardinal principle of medical practice.

My plea to you is to remember that the factual knowledge may be obtained from disinterested professional sources, such as universities, reputable texts, journals and monographs, but not from detail men or specious advertising, either of commercial houses or clinics. In failing to use this discriminating judgment, physicians have shown themselves to be as gullible as any other class of humanity.

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* From the Pharmacological Laboratory of the University of California Medical School, San Francisco.

Read before the General Medicine Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

My appeal to you is to cultivate your great art in every way. In the attempt to achieve a desired result, three steps are important. First, there must be a clear recognition of the desired end, a clearly visioned *ideal* of what is wanted; second, the *knowledge* of how to work the refractory material of the sick body to attain this end; and third, the *skill* or technique to carry out this work.

No sculptor, not even Rodin, is a greater artist than the plastic surgeon who carves a semblance of human expression from the wreckage of a shell-torn face; no musician, not even Beethoven, is a greater artist than the physician who develops a harmony of adjustment from the dissonances of a psychopathic personality; no painter not even a Romney, whose pink-cheeked maidens brighten every big gallery, is a greater artist than the physician who can put the bloom of good health in the cheeks of his patients; no dramatist or actor is a greater artist than the physician who daily plays his rôle in the everlasting and thrilling drama of the lives and deaths of his patients.

My plea, then, is to study and practice your art. Whatever scientific background you may have is merely to make your art more effective. Study art in all its many forms. All good physicians are good artists. It is not merely a coincidence that so many physicians are painters, musicians, novelists, and poets.

MEDICAL ETHICS AND ETIQUETTE

These considerations have important moral implications. Osler emphasized that the Hippocratic association of *Philotechnia* with *Philanthropia*—love of the art and love of humanity—is an ancient recognition of what is a fine idealism of more than merely academic interest. Love of the art promotes love of humanity, and vice versa, and in either case science also. Beauty, goodness, and truth may be for us, as for the Greeks, an idealistic and intellectual trinity of great significance; as George Sarton is showing in his humanistic studies on the history of science.

It is in the matter of personal conduct that the artistic qualities of the good physician may be most effectively expressed. Personal conduct is not easily based on rules, although these help to set a standard of good taste or conventional etiquette. Most of what is called "medical ethics" is concerned with merely the etiquette of professional conduct. The current rules of "medical ethics," derived from Thomas Percival's code of 1804, bear a striking similarity to trade-union rules, for their chief purpose seems to be the enhancement of the prestige and success of the profession and its members. This is a form of hedonism; that is, it is based on the motive of personal pleasure. It is quite different in its purpose from the Hippocratic association of *Philotechnia* and *Philanthropia,* which is an expression of "idealism," that is, conduct motivated by a desire to promote the welfare of society as a whole. One of the chief difficulties in the personal-conduct problem of modern medicine is the clash between the idealistic ethics it professes and the hedonistic ethics which it practices. Years ago I tried to point out the factors responsible for the situation;[1] but, naturally, the profession paid no attention to my sophomoric effort. Now, with society pressing the issue, it is becoming more acute; but I fail to notice that the profession is any more conscious of the fundamental problems of ethics than it ever was. It might indeed be helpful to get some advice from scholars who know something about ethics, like men of the caliber of Professor Warner Fite, for example. There are only a few of them, for only a few of our universities still think ethics worthy of prominence in the curriculum. The recent pronouncement of the official agency of the American Medical Association on this subject[2] is what one might expect. I doubt if more than a few dozen members of the Association read or studied it. To any with intelligence who did so, its inconsistencies must have been apparent, even though it made a great show of erudition with copious (but prejudicinally selected) documentation. Medical ethics should really be a simple matter. In its relations with society, the profession of medicine, as it exists now, must follow a truly idealistic ethics, or society will destroy it.

In the individual relations between its members, medicine should promote the ethics of friendship. Friendship implies all that is noble without being sentimental. From good friends one is certain to derive three great things: tolerance, comfort, and inspiration. Even to become friends, let alone remain so, the cultivation of tolerance for each other is the first essential. Tolerance promotes understanding and sympathy. Tolerance leads us to appreciate that we are all made of the same common clay, a reflection that comforts the young and promotes patience in the old. Tolerance in the practice of medicine is essential, since the practice of medicine is an art, and there is no uniformity of opinion on anything artistic. Tolerance among friends does not imply acquiescence in anything falling short of an ideal; quite the contrary! Tolerance makes possible the recognition of the mote in one's own eye, and thus makes one more willing to forgive the beam in one's neighbor's. Tolerance among friends is reciprocal, and promotes comfort and inspiration.

Friendship has little meaning unless it provides comfort and inspiration—comfort in the daily defeats we all suffer, and inspiration for doing our best in the daily tasks we all must face. From the comfort one may feel in a sympathetic friend usually arises a mutual feeling of trust and confidence that becomes the strongest incentive to its own justification. The greatest moral force one may feel is the necessity of justifying the faith placed in one by one's friends.

In the daily burdens of medical practice, professional friendship may be the greatest incentive to the best in medical ethics. Then, in a truly idealistic manner, personal advantage of any sort becomes willingly sacrificed for the welfare of society as a whole. Genuine friendship in the profession eliminates any necessity for the formulation of rules of etiquette. Mutual respect among friends, built by tolerance, comfort, and inspiration, promotes the qualities of gentlemanliness. We all know what gentlemanly conduct means. There is no need to establish rules and definitions by which it may be judged. Perhaps that is why Dr. St. John Roosa proposed, during the squabble over "medical ethics" in the New York State Medical Society in the eighties, that the only rule need be that a member conduct himself as a gentleman. Friendship makes this easy.

SPECIALISM

In modern medical practice appear two difficult problems—specialism and preventive medicine. The former is an ancient relic of the ancient tendency of vain men to furnish themselves with false fronts. It is inherent in the vanity of human character, and from Babylonian times has never been able to divorce itself, in the eyes of the intelligent public at least, from a taint of quackery and hypocrisy. Specialism is, unfortunately, too often associated with pride, arrogance, and high fees. Notwithstanding national boards of certification, international societies, and other dignified protestations of limited (and therefore presumably superior) practice, the taint continues. It will continue until the general health adviser, the general practitioner—the friend, counselor and confidant of the family—is returned to that dignity of status where the specialist's fee will be no more than his. Can this be accomplished? Easily. Let the general practitioner take preventive medicine as his specialty—and give him a financial incentive to practice it. Let the specialist keep his financial interest in people's sickness, but let the general practitioner derive his income from keeping his patients well—on a retainer-fee basis. The public has always had a great interest in the presumed Chinese method of practicing medicine.

PREVENTIVE MEDICINE: THE GENERAL PRACTITIONER'S SPECIALTY

The avowed ideal of the profession of medicine is the prevention of disease. From the first year of his medical training, this is the goal toward which all the efforts of the future physician are supposed to be directed. But as soon as he reaches clinical training the average medical student has already been made so callous by his professional elders that he cynically shrugs off any personal responsibility in preventive medicine by leaving it forever after to official agencies—meaning the overworked and underpaid governmental public health officials. The average doctor pays only lip service to their work. The average doctor is well aware that the effective application of preventive medicine reduces his practice. The average doctor knows, but dares not admit, that his income depends on the presence of sickness. He has a financial interest in the illness of his patients, and no monetary stake in the health of his clients. It is impossible under these circumstances for a practicing physician honestly to support measures in behalf of public health or preventive medicine. It is this amazing discrepancy between what the organized medical profession preaches and what its individual members practice that is so disconcerting to intelligent laymen.

The effective practice of preventive medicine by the individual physician is possible. While it is not traditional, and while current custom may be against it, every moral factor is favorable for it. It can be done without invoking the paper specter of state medicine or the bogey of medical insurance, or the presumed difficulties of contract practice. It can be done in such a way as to preserve and enhance the individual, personal relationship between a doctor and his patient which group practice, a jungle growth of specialism, and a commercially efficient office and hospital management, have almost destroyed.

The effective practice of preventive medicine is possible. A physician may make a personal individual arrangement with a patient. In accordance with his judgment on the patient's physical condition, family and business environments, and his general attitude and position, the physician may, for a fee, varying with these conditions, agree to examine the patient as often as he thinks expedient, give such advice or prescriptions as seem warranted, and make such house calls as he may think wise. The agreement should not include special diagnostic services, emergency affairs, hospitalization, or operative or other special procedures. The physician in such an arrangement would be a health adviser on a retainer fee.

Under the genial leadership of Langley Porter, such a system has been followed in pediatrics in San Francisco for over twenty years. Its wide extension and popularity are sufficient evidence of its practical success. It is amazing that so simple a method of providing a practical financial incentive to the effective practice of preventive medicine has not been universally advocated. Under such a system it is obviously better for the doctor to keep his patients well than to have to give treatment when they are sick. The doctor gains in time, which ideally would be used to improve his knowledge and not merely his golf. The proposed scheme is so simple, and sounds so reasonable, that there must be something wrong with it which has prevented its adoption long ago. The medical profession has had the example of the legal profession in practicing preventive law for many years. In San Francisco, I am reliably informed, about three-fourths of the income of the more reputable lawyers is derived from retainer fees operating to keep both average individuals and families, as well as estates and large corporations, from court or other legal complications.

To my surprise I have been unable to find any intelligent medical opinion which can point out a serious disadvantage or fallacy in the proposal, except a vaguely expressed fear that the physician may occasionally be imposed upon. If the desired relation of friendship and mutual trust existed between physician and patient, abuse in either direction would be unlikely, and even if it were to occur, either party could terminate the agreement.

IN CONCLUSION

As always, I have talked too much and said too little. My appraisal of modern medical practice may be criticized on the ground that, since I am not a physician, I know nothing about its problems; but not on the ground of lack of sincerity or sympathy. I have tried to discuss four formidable necessities of modern medicine: first, the need of correlating the scientific and artistic phases of practice; second, the need of developing "medical ethics" in a manner consistent with idealistic ethical theory; third, the need of raising general practice to the dignity of specialism; and fourth, the need of providing a monetary incentive to the effective practice of preventive medicine—preventive medicine as the general practitioner's specialty, practiced on a retainer fee basis. I hope this tough meat which you have been given to chew over will not jeopardize your kind friendship toward me. Your tolerant friendliness means much in comfort and inspiration to me, and I hope that I may reciprocally justify such a feeling in you.

University of California Medical School.

REFERENCES

1. Leake, C. D.: Percival's Medical Ethics. Baltimore, 1927, pp. 1-57; J. A. M. A., 81:366 (Aug. 4), 1923; Boston Med. Surg. Jour., 197:357 (Sept. 1), 1927.

2. Economics and the Ethics of Medicine, compiled by the Bureau of Medical Economics of the American Medical Association, Amer. Med. Assn. Bull., 31:93-94 (May), 1936.

ACUTE APPENDICITIS*

A CLINICAL REVIEW OF ONE THOUSAND CONSECUTIVE CASES

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Discussion *by Charles T. Sturgeon, M.D., Los Angeles; H. Glenn Bell, M.D., San Francisco; Edwin M. Taylor, M.D., Oakland.*

It is the purpose of this paper to show the need for early operation in acute appendicitis, and to emphasize the application of certain measures in its treatment. The number of publications concerning appendicitis is increasing (Table 1); the renewed interest in the subject is likewise reflected in the serious discussion, in larger medical centers, of various controversial views. The present discrepancies in the operative mortality rate point toward some basic deficiencies in the present mode of treatment. There yet remain many controversial questions pertaining to surgical intervention, among which some of the most important are the time of operation, the necessity for drainage, the type of incision, the kind of anesthesia, etc. In order to justify our present methods of procedure, we have analyzed the consecutive cases of one thousand patients surgically proved to have acute appendicitis who underwent immediate operation on the emergency service of the San Francisco Hospital. This series is comprised of patients treated on one service, according to the same policy, over a ten-year period. During this period, the operative mortality in all types of acute appendicitis reported here was 3.6 per cent. In gangrenous appendicitis without perforation, it was 1.9 per cent, and with perforation, somewhat higher (Table 2). These figures compare favorably with those of other American and European clinics[1] (Table 3).

Table 1.—*Literature Concerning Appendectomy and Appendicitis 1914-1935*

Year	Number of Articles
1914	33
1925	142
1929	323
1930	292
1931	334
1932	348
1933	392
1934	365
1935	370

ONE THOUSAND CONSECUTIVE CASES OF ACUTE APPENDICITIS

Most of the emergency surgery for the indigent is done in the San Francisco Hospital (bed capacity 1,000) and, as has been pointed out by others, the type of appendicitis seen in this stratum of society is usually of the variety most difficult to treat. The patients, of poor physical stock, are more likely to delay in seeking medical attention and to indulge in self-medication and purgation than are other classes.

FOUR GROUPS

We have divided our cases into four major groups, on the basis of pathologic changes proved at operation. These groups, with their respective mortality rates, are:

	Drained Per Cent	Not Drained Per Cent	Total Per Cent
1. Simple acute appendicitis	......	......	0.84
2. Gangrenous appendicitis, without perforation	9.0	0.9	1.9
3. Gangrenous appendicitis, with perforation	10	2.4	8.8
4. Appendiceal abscess	......	......	5.3

This classification has been chosen because of its simplicity. One great difficulty, in comparing statistics, is the lack of uniformity in classification by various authors, and the inaccurate or incomplete statement of the pathologic changes actually present.

DIAGNOSIS

The preoperative diagnosis was seldom in doubt. The classical history of abdominal pain, followed after a few hours by increasing signs and symptoms of localizing peritonitis, was the usual observation.

A good history and a careful physical examination are most important. In our experience, temperature and blood count seldom are the determining factors in diagnosis, because of their

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Read before the General Surgery Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

TABLE 2.—*Mortality by Type*

Type	Description	Cases	Total Mortality Per Cent	Mortality Per Cent, Excluding Deaths and Not Resulting from Appendicitis
I	Acute, simple	355	0.84	0.65
II	Gangrenous, nonperforated	256	1.9	1.9
III	Gangrenous, perforated	202	8.8	7.4
IV	Appendiceal abscess	187	5.3	4.4
	Total	1,000	3.6	3.0

wide variation in identical appendiceal pathologic states.

Most errors and delays were made in the true pelvic and retrocecal types of appendicitis. In both instances, while the prodromal history, etc., may be suggestive, there is little or no evidence of parietal peritoneal involvement. The pelvic appendix often produces signs and symptoms referable to the bladder and rectum, such as frequent stools and dysuria. Further, in pelvic appendicitis the early signs and symptoms of peritonitis may be those referred to the left lower quadrant. The presence of a tender mass rectally is sufficient to substantiate the diagnosis of pelvic appendicitis in any suspicious case. The most significant sign in retrocecal inflammation is tenderness in the flank, with little or no rigidity of the anterior abdominal wall. Because of the proximity of the right ureter to the inflammatory process, one often finds signs and symptoms suggestive of disease of the right upper urinary tract.

THE TIME TO OPERATE

Perhaps most controversy arises concerning the problem of the time to operate. Agreement is general that, in the early stages of acute appendicitis, operation should be performed immediately. Methods differ, however, for those patients who are seen late—that is, after the third day. From the third to the sixth day of the attack is the most dangerous period. Stanton,[2] in an analysis of 60,000 cases reported recently, shows that the mortality in that period is from 8 to 12 per cent. During this time, either the process is subsiding or peritonitis is present. As Richardson[3] has said, "It is too late for early operation and too early for late operation." Such distinguished surgeons as Murphy,[4] Fowler,[5] and Ochsner[6] in the United States, Sherron[7] in England, and Fromme [8] in Germany, have defended expectant treatment in certain of these difficult types of appendicitis. It has been said, no doubt correctly, that it is the unintelligent application, and the abuse of the conservative regimen, which have done more harm, and that it is the choice of unsuitable cases which has brought this principle into disrepute. Wilkie[9] said: "Those who say that there is no state in which one should not operate may be skillful technicians, but they are not surgical pathologists." Despite such formidable opinion to the contrary, we feel strongly that appendicitis in any stage of development, except for a small group of cases to be mentioned later, requires immediate surgery. To substantiate or disprove this statement, the following questions must be answered:

TABLE 3.—*Comparison of Results of Treatment of Acute Appendicitis in Large European and American Clinics*

	Operative Mortality Per Cent
European clinics	5.5
American authors	5.10

1. Can the pathologic changes present be determined accurately enough before operation to warrant delay?
2. Although it is true that late cases have a high mortality, has it been convincingly shown that the mortality is actually higher with operation than without it?
3. Is the low mortality in this series the result of any factor other than the choice of the time to operate?
4. When is the time to operate?
5. Which patients should not be operated upon?

1. *Can the pathologic changes be determined accurately enough before operation to warrant delay?*

A review of the literature shows a cumbersome number of statistics which seem to support widely diverse conclusions. This may be explained by the lack of uniformity in the classification of types of appendicitis, and the clinical basis upon which the classification is made. From clinical study alone it is almost impossible to determine accurately the stage of the changing pathologic process in acute appendicitis. Not everyone can, as Deaver[10] has said, "put my ear to the abdomen, lay my hands upon it . . ." and arrive at a clear conception of what is occurring beneath the abdominal wall. Kennedy,[11] discussing what he derisively terms "the physiologic surgeon," and asks: "What is this quiescent stage of the physiologic surgeon? It can be summed up as a mistake in his assumption as to the extent of peritoneal involvement, so that when the physiologic surgeon puts his patient on the waiting list for the subsidence of the acute symptoms ere he considers the patient surgical, *he is wrong,* not only in his idea of the extent of the pathologic involvement, but he is permitting a very local condition to become a very diffuse one. He is outraging the law which gives success in perforative lesions of the abdominal cavity, namely, the earliest possible

Table 4.—*Seventy-five Preoperative Diagnoses*

	Local Pathology Change	Location of Appendix	Question of Rupture	Extent of Peritonitis	Abscess Formation
Per cent correct	33.3	40	58.6	61.5	31.3
Per cent incorrect	53.3	49.3	41.4	34.6	14.6
Not noted	13.3	10.6	0	0	4

operative hour. . . . The physiologic surgeon never gets an opportunity to check up on his mistakes; he never learns the true extent of the pathologic lesion other than from the postmortem room."

In order to ascertain the accuracy of preoperative diagnoses, various members of our staff committed themselves in writing before the patient went to surgery. The results of seventy-five opinions were enlightening, in that in estimating "perforation" or "nonperforation," the percentage of error was 41.4; in estimating the extent of peritonitis (*i. e.*, whether it was local or general) the percentage of error was 33 (Table 4).

The underlying pathologic condition is complicated, and is different in each patient. In many of our patients, rupture occurred within six hours, while in a larger number, perforation had not occurred after seventy-two hours. As subject to criticism as this tabulation may be, it does illustrate the fact that in many cases, at least, no conclusion may be drawn with any degree of certainty as to the underlying pathologic factors. Even if such information were obtainable, it is not possible to know in which direction progress is taking place. As Gile and Bowler[12] said: "In delaying surgical intervention in early peritonitis with a rate of 6.5 per cent, we had no preoperative basis for prophesying whether the transfer would be to abscess formation and a mortality of 3.33 per cent, or to general peritonitis with a rate of 36.4 per cent." This is the crux of the situation. The underlying pathologic change is different in each case of appendicitis. It is this underlying change and not the element of time which determines the outcome. The physical evidence of peritonitis is also a very variable factor depending upon the location of the appendix, the pathologic condition, and the reaction of the patient. We are convinced that even competent observers cannot estimate accurately the pathologic condition preoperatively, and hence it seems illogical that we should pursue a course of expectant treatment on such questionable premises. Furthermore, there was an error of 100 per cent in two of our recent cases, in one of which the condition was an acute Meckel's diverticulitis; in the other, a volvulus of the cecum with early gangrene. It is obvious that delayed treatment of such patients would have been disastrous.

2. *Although it is true that late cases have a high mortality, has it been convincingly shown that the mortality is higher with operation than without it?*

The answer to this question is not difficult. As stated above, statistics are exceedingly numerous in the literature on appendicitis; they appear to point in opposite directions. Since the same patient cannot, on the one hand, be operated upon in a certain stage of the disease and, on the other, be accorded conservative treatment at the same stage, no approach to a scientific decision may be reached. Furthermore, the criteria by which the classifications were evolved vary so widely that one is never sure of the comparableness of the different series. The issue is confused further by variations in the classifications themselves. Ochsner[13] has said that he obtained 90 per cent recoveries by the use of his conservative method in a type of case which formerly had the same percentage of deaths. It is to be noted, however, that conservatism was supplemented by meticulous adherence to his fourteen dicta which included the Fowler position, the administration of fluids, use of morphia, starvation, etc. Had these points been followed in connection with operation, the mortality rate might have been different in the earlier series.

3. *Is the low mortality of this series the result of any factor other than the choice of the time to operate?*

Intelligent preoperative and postoperative care bear a direct ratio to mortality. A few hours' delay before operation frequently is recommended in order that the patient's general condition may be improved. As Arnheim and Neuhof[14] stated: "The trip to the hospital may have been long and difficult, the patient may arrive in a highly excited state, the patient may be partially dehydrated. These are some of the factors which often lead us to wait a few hours or longer before proceed-

Table 5.—*Operative Mortality in Representative and Comparable Series*

	Cases	Mortality Per Cent
San Francisco Hospital	1,000	3.6
Boland (Atlanta)	4,270	4.4
Keyes (St. Louis)	771	3.8
Fairchild (Woodland)	541	4.4
Bower (Philadelphia)	5,121	5.9
Reid (Cincinnati)	2,003	8.5

Table 6.—*Drainage Comparison With Russian Series (1936)*

	San Francisco Hospital	Leningrad Institute for Quick Aid
Number of cases	1,000	1,944
Per cent of abscesses following drainage	13.2	7.8
Per cent of abscesses without drainage	2.9	3.3
Per cent of mortality following drainage	9.8	17
Per cent of mortality without drainage	1.4	1.5

ing with operation in the second and third day of attack in acute appendicitis."

If early peritonitis is noted at operation, the accepted treatment of peritonitis is begun at once before paralytic ileus develops. The early and continuous use of the Connell suction is a valuable adjunct to postoperative treatment. It creates a negative pressure which prevents gastric dilatation, paralytic and mechanical ileus. If the apparatus functions properly, the need for enterostomy becomes very limited. Fowler's position and hot massive abdominal stupes also aid in the patient's satisfactory convalescence. The intelligent use of pitressin-like compounds has also proved valuable in the treatment of paralytic ileus. The early use of cathartics or enemas after operation has dangerous potentialities, and these measures are never employed by us. Recently we witnessed elsewhere two fatalities which were the direct result of postoperative enemas. In these, the friable cecum was ruptured at the site of the appendectomy.

4. *When is the time to operate?*

For the reasons stated above, it is our conviction that immediate operation is essential. This has long been axiomatic in the treatment of the early cases. We believe that, with few exceptions, this same dictum should obtain in all cases and types of acute appendicitis regardless of the period in which the patients are first seen, and that this policy is sound is evidenced by our mortality rate, which compares very favorably with those reported in the literature (Table 5).

5. *Which patients should not be operated upon?*

Those patients whose condition is such that they are not likely to survive the ordeal of the operation itself are not operated upon immediately. This group includes the patient who is in the latest stages of the disease. It seems likely that many of the papers which advocate expectant treatment refer to this type of peritonitis. If this is so, we are in agreement with them; the most immature surgical judgment would not dictate operation in such cases.

Our own experience places patients with the following signs and symptoms in this group:

(*a*) Those in poor general physical condition either from coincidental disease, such as a cardiac or pulmonary lesion, or those debilitated from long sepsis or toxic state.

(*b*) Those with peritonitis that, from physical signs and the general bodily reaction, seem unusually acute and fulminating. In these patients the pulse is rapid and the volume impaired. Often there is other evidence of threatened circulatory failure. This condition is seen frequently in children. This group of patients undoubtedly will do better if operation is deferred until a conservative type of therapy can build up the general or local resistance. The so-called Ochsner type of conservative therapy has its ideal application in these patients. In many so treated, nature will ultimately reduce the surgery indicated to a simple incision and drainage of a localized abscess; usually the abscess points into the cul-de-sac and should be opened through the rectum or vagina.

If our policy of early operation is not increasing our mortality rate, then the pressing demand in some clinics for delayed operation has little justification. It is interesting to note that recently, in a comparable series of cases studied at the Leningrad Institute for Quick Aid in Russia,[15] the same conclusion was reached (Table 6). Further, early operation entails the factor of greater economy in the matter of prolonged hospitalization. The presence of long-standing intra-abdominal pathologic conditions, such as would follow delayed treatment, must lead to a greater number of intra-abdominal complications. The eventual drainage of intra-abdominal abscesses often results in ventral hernia.

TYPES OF INCISIONS

We have favored modifications of the McBurney incision in most instances. The exposure has been adequate and the convalescence shorter and smoother.

A right rectus incision provides very free and adequate exposure, but there is always the danger of disturbing a localized peritonitis and thus contaminating the entire abdominal cavity.

Objections to drainage through a rectus incision are those of sequelae such as evisceration, early and later intestinal obstruction, ventral hernia, etc. Since we have almost ceased to drain, our objections to the rectus incisions are less than formerly.

DRAINAGE IN PERITONITIS

For several years we have avoided all intra-abdominal drainage in peritonitis.[16] Perforated peptic ulcers, traumatic injuries of the gastrointestinal and genito-urinary tracts are closed without drainage. It is only in the chronic, well walled-off abscesses that we still use drains. The patients in this series who had drainage were those, for the most part, in the earlier years of our study before the general use of drains had been discarded. There is abundant clinical and laboratory evidence to show that drainage of the abdominal cavity in peritonitis is impossible and inadvisable for the following reasons:

(*a*) Within a very few hours the drain ceases to act other than as a foreign body which is walled off by adhesions of omentum, intestines and coagulum.

(*b*) The presence of a foreign body, such as a drain, has been shown to lower the natural immunity of the peritoneum against infection. (This would indicate that the drain is a menace rather than a help.)

(*c*) Drainage causes a temporary loss of the normal defensive peritoneal fluid.

(*d*) There is a longer and more stormy convalescence because of the added intra-abdominal pathologic changes caused by the foreign body, resulting in partial obstruction, ileus, and increased peritonitis.

(*e*) The incidence of infection in the wound is greater; an intra-abdominal drain through an infected wound attracts and harbors all the dependent suppuration of that abdominal wound. The profuse purulent discharge from such a drained wound arises primarily from suppuration

TABLE 7.—*Drainage*

	Intra-abdominal Complications (Pelvic Abscess; Ileus, Dynamic and Adynamic; Hemorrhage, Subphrenic Abscess, etc.		Pelvic Abscess Per Cent		Mortality Per Cent	
	Group II Gangrenous Nonperforated	Group III Gangrenous Perforated	Group II	Group III	Group II	Group III
Drained (121 cases)	19 per cent (of 32 cases)	37.7 per cent (of 89 cases)	9.3	15.3	9	10
Not drained (337 cases)	2.7 per cent (of 224 cases)	8.9 per cent (of 113 cases)	0	7.9	0.9	2.4

in the abdominal wall and not from within the abdominal cavity. The depth of such a drainage tract, therefore, collects suppuration from the abdominal wound and hence the intra-abdominal infection surrounding the drain is aggravated.

(*f*) There is a high incidence of early and late postoperative hernia.

(*g*) Necrosis from the pressure of the drain has been the cause of many fecal fistulae and fatal hemorrhages. (We have had only one case of fecal fistula in this series of one thousand cases of acute appendicitis, and it occurred in a case in which drainage was employed.)

(*h*) Drainage has increased the incidence of secondary intra-abdominal abscesses in our series (Table 7).

We wish to emphasize that this discussion regarding drains refers to intra-abdominal drains, and not to those which are placed in the abdominal wall down to the peritoneum. We feel that adequate drainage of a badly contaminated abdominal wound is very necessary.

CONCLUSIONS

1. An apparently increasing mortality rate from peritonitis needs very careful study with a view to the standardization of treatment in acute appendicitis.
2. We believe that immediate surgery, well done, will give the best ultimate results.
3. There is a very small group of patients whose general and local condition may contraindicate immediate surgery. This group is described.
4. The fallacy of delayed treatment is discussed.
5. The arguments against intra-abdominal drainage in peritonitis are stated.

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REFERENCES

1. Campiche, P. S.: Digest of Statistics on Appendicitis with Deductions Therefrom, West. J. Surg., 41:605 (Nov.), 1933.

2. Stanton, E. MacD.: Acute Appendicitis—A Study of the Correlation Between the Time of Operation, the Pathology, and the Mortality, Surg., Gynec., and Obst., 59:738 (Nov.), 1934.

3. Richardson, M. H., and Brewster, G. W. W.: Appendicitis—Remarks Based Upon a Personal Experience of Seven Hundred and Fifty Cases, Boston M. and S. J., 139:25 and 53, 1898.

4. Murphy, John B.: Surgery of the Appendix Vermiformis, Keen's Surgery, 4:727-796, 1914. W. B. Saunders Company, Philadelphia and London.

5. Fowler, George R.: Diffuse Septic Peritonitis, M. Rec., 57:617, 1900.

6. Ochsner, A. J.: The Mortality in Appendicitis—Its Cause and Limitation, Medical News, 82:833, 1903.

7. Sherren, James: An Address on Appendicitis, Brit. M. J., 1:727, 1925.

8. Fromme, A.: Soll im Intermediärstadium der akuten Appendicitis operiert werden? Erwiderung auf die Arbeit von Merkens, Deutsche Ztschr. f. Chir, 119:562, 1912. Leipz. Beiträge zur Appendicitisfrage auf Grund der Erfahrungen der Göttinger Klinik in den letzten vierzehn Jahren, Deutsche Ztschr. f. Chir., 108:429, 1910-11. Leipz.

9. Wilkie, D. P. D.: Mortality in Acute Appendicular Disease, Brit. M. J., 1:253, 1931.

10. Deaver, J. B.: An Opinion on the Present High Operative Mortality in Acute Appendicitis, Surg., Gynec., and Obst., 51:529, 1930.

11. Kennedy, James W.: Practical Surgery of the Joseph Price Hospital. F. A. Davis Company. Philadelphia. 1928.

12. Gile, John F., and Bowler, John P.: The Management of Perforated Appendicitis, J. A. M. A., 103:1750 (Dec. 8). 1934.

13. Ochsner, A. J.: See reference No. 6.

14. Arnheim, E. E., and Neuhof, H.: A Lowered Mortality in Acute Appendicitis and the Basis Therefor, Surg., Gynec., and Obst., 59:189 (Aug.), 1934.

15. Krasnoselskiy, M. V.: Operative Treatment of Appendiceal Peritonitis Without Drainage, Vestnik khir., 40:193, 1935. Leningrad.

TABLE 8.—*Mortality by Age Groups*

Age	Cases	Deaths	Mortality Percentage
0-9	83	5	7.9
10-19	327	5	1.5
20-29	307	5	1.6
30-39	134	7	5.2
40-49	83	6	8.2
50-59	36	4	11.1
60-69	19	4	21.0
70-79	3	0	0
80-plus	2	0	0
Total	1,000	36	3.6

DISCUSSION

CHARLES T. STURGEON, M. D. (1930 Wilshire Boulevard, Los Angeles).—Though we continue to write about acute appendicitis, expressing our views and methods of procedure, the mortality also continues to increase. Many factors are responsible for this increasing mortality:

1. Delay in seeking medical attention.
2. Incorrect diagnosis.
3. "Watchful waiting."
4. Inadequate preoperative preparation of the patient.

I feel that the greatest factor contributing to the mortality of appendicitis is the so-called "watchful waiting."

We have all been taught that as soon as the diagnosis of appendicitis has been made, an appendectomy should be performed immediately. Recently many papers have appeared wherein the author states that patients who have had symptoms of appendicitis for two or three days should be placed under observation; and many doctors, especially the younger men, have accepted this procedure as best applicable to the majority of cases of appendicitis.

In my opinion, "watchful waiting" should be applied only to cases with questionable diagnosis, and only after a careful history and examination has been made. The patient should be hospitalized and carefully observed and examined every two hours. As soon as the diagnosis is established, an appendectomy should be performed.

We all realize that patients presenting a generalized peritonitis do not come under the above classification. These patients require observation and preoperative preparation, and when a localized abscess is discovered, it should be drained.

We have stressed the point that the laity must be instructed in the fallacy of delay in consulting a physician, and as to the danger of administering cathartics to patients with abdominal pain. We should also reinstruct the medical profession that immediate surgery is still the treatment of appendicitis.

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H. Glenn Bell, M. D. (University of California Hospital, San Francisco).—It is difficult to discuss a paper when one is in complete accord with the ideas expressed by the author. That is my position in regard to this article. For the past seven years I have followed the plan suggested by Doctor Rhodes and his co-authors, and the results have been very satisfactory.

In one of the tables of Doctor Rhodes' paper he has noted the operative mortality in representative and comparative series from different places. I am familiar with one of the large series cited, and know that in that series, even when treatment has not been delayed, drainage is used much more often than is our custom. Whether that is the entire reason for their higher mortality, it is rather difficult to say. It is reasonable to believe, however, that such drainage plays a tremendous part.

Discussion of isolated cases prove nothing. Only by a careful analysis of a thousand or more cases, such as Doctor Rhodes has made, can one hope to draw conclusions which will help the average surgeon in the more intelligent care of his patients.

In general, the mortality of acute appendicitis in this country is still too high. I am convinced that one reason for this is the feeling that acute appendicitis is a simple disease and that operation for it is simple to perform. Yet we know that appendectomy for acute appendicitis may be a most difficult operation and may tax the surgical skill and judgment of the best surgeon in the country.

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Edwin M. Taylor, M. D. (230 Grand Avenue, Oakland).—It is a pleasure to have an opportunity to discuss some of the controversial points of Doctor Rhodes' paper on "Acute Appendicitis," namely:

When Is the Correct Time to Operate on "Late Cases."—This cannot be set from the beginning of the attack, as some authors attempt to do, but from the physical finding. It seems to me that the very desperately ill, toxic patient, with rapidly diffusing or already diffused peritonitis, has a better chance of recovery if operation is delayed and the so-called Oscher treatment is instituted. The other type of case in which I feel operation should be delayed, is the one with early beginning abscess formation, where there still remains some generalized peritonitis. In the latter type of case, usually in a week or ten days the localized abscess can be drained, and often the appendix removed, if readily accessible, with comparative safety.

Regarding Drains.—The profession in general are using less drains, but I cannot feel quite safe in closing up an abdomen in which the appendix has perforated. I cannot feel that a soft rubber drain is such a hazard in the abdomen. Maybe drains do not actually drain for many hours, but when placed in dependent points, as in the pelvis, in the right lateral gutter or beneath the terminal ileum, are there not sinus tracts formed, through which drainage would take place, should pus accumulate in these areas?

Type of Incision.—This is of paramount importance in treating acute appendicitis with or without peritonitis. The McBurney, or some modification of the lateral incision is certainly the incision of choice when the diagnosis of appendicitis is at all certain. Some large clinics have greatly decreased their mortality by almost universally adopting this type of incision without any change in their use of drains or methods of handling the cases.

Doctor Rhodes' results show a 3.6 per cent operative mortality, certainly lower than any reported from similar clinics.

THROMBOSIS AND EMBOLISM: PREOPERATIVE AND POSTOPERATIVE CARE IN THEIR PREVENTION *

By John H. Breyer, M.D.
Pasadena

Discussion *by E. Vincent Askey, M. D., Los Angeles; Willard J. Stone, M. D., Pasadena; H. Brodie Stephens, M. D., San Francisco.*

Massive pulmonary embolism has produced tragic and sudden deaths in the practice of every experienced surgeon. It is a postoperative disaster which every surgeon fears. Concerning fatal pulmonary embolism, statistics seem to show that it accounts for about 6 per cent of surgical deaths. One series, by Wharton and Pierson, reported that nearly half of the deaths after gynecologic operations were due to pulmonary embolism. Postoperative thrombophlebitis, which happens more frequently, prolongs hospitalization and often incapacitates the patient for months. Femoral thrombophlebitis, as reported by Albanus, occurred sixty-three times after 1,140 laparotomies, and forty-four of these cases resulted in embolism, of which ten patients died. A critical review of the literature is hereby attempted, hoping to develop some practical plan of prevention which might lessen the incidence.

FREQUENCY

Thrombosis and embolism are complications which occur in many diseases and conditions other than surgical and are, therefore, of general medical interest. They occur in the infectious diseases, as in influenza, pneumonia, tuberculosis, typhoid fever, and in sepsis. They occur in diseases in which the blood itself is altered, as in the anemias, leukemias, and in polycythemia; in cancer and in the degenerative diseases of the vascular system. American, as well as European literature, seems to indicate that the incidence of thrombosis and embolism has increased since the period of the World War. A report from the department of pathology of the University of Toronto, published in 1933, states that they have demonstrated pulmonary emboli in about 10 per cent of routine autopsies upon adults. They found it more common in medical than in surgical cases. In 6,581 necropsies performed in the city hospital at Kiel, Germany, reported in 1934, thrombosis was encountered in 14 per cent, and pulmonary embolism was observed in 9.7 per cent of the autopsies. From 1919 to 1928 the incidence of thrombosis cases had increased eight and one-half times the average for the years prior to 1919. Thrombosis occurred about equally in the two sexes, and was more frequent after forty-five years of age.

RELATION TO SURGICAL TRAUMA

As surgeons we are concerned whether trauma incident to the operation may be an activating factor in the production of thrombosis and embolism. Thrombosis is primarily a physiologic process, a defense mechanism, otherwise we would all die of hemorrhage. This defense mechanism comes into action when injury to the blood vessels and tissues takes place. Its initiation appears to be through the action of some vital substance or substances called forth by the injury, which are variously known as fibrin ferment, thromboplastin and thrombokinase, in the formation of which the leukocytes, blood platelets, calcium salts, and tissue extracts play an important rôle. Normally, clot formation takes place sufficient to plug the severed vessels, and then ceases. Why it ceases is as great a mystery as why it starts. When clot formation exceeds its normal required limits and extends into the stream of circulating blood, it becomes the pathologic process of thrombosis. The restraining limiting factors are no longer acting; why, we do not know. Natural control of the tendency to thrombosis may again be reëstablished, holding the tendency in abeyance either permanently or for a time. When again brought under control absorption, organization, endothelialization and canalization of the thrombus may take place.

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CONTRIBUTING CAUSATIVE FACTORS OF PATHOLOGIC THROMBOSIS

The most widely accepted contributing factors in the causation of pathologic thrombosis are: (1) slowing of the circulation; (2) changes in the vessel wall due either to trauma or infection; and (3) alterations in the composition of the blood itself. It is now generally recognized that the exciting cause is not one factor alone, but that an interaction of two or more factors is probably necessary for the development of thrombosis.

Slowing of the Circulation. — Slowing of the circulation is probably the most important cause in the development of thrombosis. Thrombosis forms rarely in the heart and arteries, but is comparatively common in the veins. It is rare in the young with efficient circulation, but becomes more frequent in advancing age with degenerative changes in the cardiovascular system, which may result in slowing of the blood stream with lowering of the blood pressure. Thrombosis occurs quite frequently during life in the prostatic plexus of veins. Almost any adult male past middle life has calcified phleboliths in this plexus of veins as a result of previous formation of thrombi, and at death, from any cause, this plexus is likely to be distended with antemortem clots. In the female the cervical and vaginal plexuses may be similarly affected, though less frequently so. A saccular aneurysm is usually more or less filled by a thrombus. It is believed that this is due to the simple stasis or stagnation of the circulating blood at these particular locations. As pointed out by Welch, the slowing and eddying of the circulation causes the platelets to agglutinate along the vessel wall to form a homogeneous layer. Following this there is a settling out of white blood corpuscles, after which fibrin begins to form at the margins of the clot. The vessels most often involved in this type of bland thrombosis are the large veins of the extremities and pelvis, especially the femoral and iliac veins.

Changes in the Vessel Walls.—That changes in the vessel walls due to either trauma or infection may lead to thrombus formation at the site of injury has long been recognized. A thrombosis may develop, however, at a location distant from the injury site and away from the source of infection. Whether a phlebitis is primary, with secondary infection of the thrombus, or vice versa, is difficult to prove. Postoperative and puerperal phlebitides are usually explained as due to infection, being more common in patients in whom infection is present. However, a direct avenue of infection cannot always be demonstrated. Infections no doubt add to the general impairment which increases the tendency to vein complications. Many authors believe that the toxins from infection, necrotic processes, and from tissue damage are probably important contributing factors in promoting thrombosis. The vein reaction to the formation of the thrombus may be a nonbacterial reparative inflammation of the mildest form, or may be of the acutely inflammatory and suppurative type. The thrombus may be but loosely attached to the vein wall or may be firmly attached as a result of the inflammatory reaction.

Alterations in the Composition of the Blood.—Changes in composition of the blood have frequently been described as favoring the development of thrombosis. It is variously attributed to increased friability of the platelets, to increase in their number, to shortening of coagulation time, increased viscosity, accelerated sedimentation rate, dehydration, the augmentation of the clotting factors, and other changes. These are changes which cannot readily be measured, and these elements probably play no rôle in the initiation of the thrombus, but may influence the secondary coagulative phase affecting the propagation of the peripheral portions of the thrombus.

EMBOLI

An embolus, of course, is a solid, oily or gaseous mass in the free blood stream. The danger of thrombo-embolism is inversely proportionate to the amount of vein inflammation accompanying the thrombus. The pathology produced depends on the size of the embolus, its septic or aseptic character, and the size and location of the occluded artery. In pulmonary embolism the right lung is more often involved than the left, and the lower lobes more frequently than other parts of the lung. In order to be of size to obstruct one or more of the main branches of the pulmonary artery, the embolus must take origin from a major vein, which has been shown by autopsy studies in 85 per cent of cases to be usually the femoral or iliac veins. Under such conditions pulmonary edema follows, with death taking place in a few minutes, or within several hours in all but exceptional cases. Fifty per cent die within fifteen minutes.

Moderate-size emboli pass the main pulmonary artery and occlude smaller branches, resulting in pulmonary infarcts. A hemorrhagic consolidation of the infarcted lung or lobe follows, particularly if there is a coexistent respiratory or cardiac impairment. Such infarcts are said to produce a mortality of 12 to 15 per cent. Many of the smaller-size emboli produce no detectable clinical disturbance, and occur more frequently than is generally supposed. Septic infarcts may result in empyema, pneumonitis or lung abscess. However, the infrequency of infection in pulmonary infarction is offered as evidence of the nonbacterial origin of the thrombus.

CLINICAL OBSERVATIONS ON THROMBOSIS AND EMBOLISM

The following clinical details are of interest in their relation to thrombosis and embolism. Postoperative massive fatal embolism is liable to occur during the convalescent period, usually during the second week, without swelling of the legs or evidence of thrombophlebitis, or any clinical signs which would attract the attention of the surgeon to the likelihood of its occurrence. The majority of the patients are between forty and seventy years of age, and obesity seems to be a predisposing factor. The presence of cardiovascular degenerative changes and carcinoma have been noted in a high percentage of cases. The type of anesthetic used appears to have no bearing on the occurrence of this unfortunate accident which seems to follow abdominal and pelvic operations in about 70 per cent of cases. Fatal embolism most frequently follows stomach surgery, especially for cancer; pelvic surgery, especially for fibroids of the uterus; and operations for prostatic hypertrophy. Gall-bladder surgery, operations on the large intestine, appendectomies and even hernia operations may be followed by this complication. Thyroid surgery is particularly free from postoperative thrombosis and embolism. Thrombophlebitis of the superficial veins of the extremities usually does not result in large emboli, but repeated small infarcts, however, may result from dislodged fragments of the advancing type of phlebitis. When inflammation and thrombosis involve the deep veins of the extremities, it gives the operator concern. Whether such a thrombophlebitis is the suppurative or nonsuppurative type, the formation of an embolus is always a possibility.

PROPHYLAXIS: PREOPERATIVE MEASURES

It has been said, "there is a probability that the tendency to thrombosis may depend upon the patient's physical condition rather than that he has undergone an operation, but it is equally probable that had he not had the operation the thrombosis would not have developed." Prophylaxis against thrombosis and embolism rests largely upon the care with which we estimate our surgical risks, and the preoperative preparation of such impaired cases. This is especially important since the trend is to offer surgery to elderly patients even with late-stage pathology. Preventive treatment aims at (1) prevention of thrombosis and (2) the adequate treatment of manifest thrombosis. The factors responsible for thrombosis have been enumerated. It probably requires the interaction of several factors in the majority of cases, yet some develop thrombosis with a minimum of the contributing factors, and others with the maximum number may escape this complication. The patient should be put in the best possible physical condition and made the best physiologic risk possible under the circumstances. A careful chest examination by an internist should be part of the preoperative routine. Definitely known foci of infection of teeth, tonsils, prostate or cervix should be considered in their possible relation to the inevitable hazard which accompanies any operative procedure. Only the acute surgical emergencies should be operated in the presence of "head colds." The appropriate cardiovascular stimulants should be used when evidence of myocardiac insufficiency is present, such as increased pulse rate with falling blood pressure. Digitalis, a drug much misused by surgeons, is often not only useless, but harmful. The use of digitalis in adequate dosage should be restricted to cardiac insufficiency or decompensation, and especially to disturbances of rhythm such as auricular fibrillation, in which a rapid irregular heart rate is accompanied by a pulse deficit. Slowing of the heart rate in auricular fibrillation as a result of the administration of digitalis is beneficial. The administration of digitalis is of doubtful utility to slow the heart rate in toxic or septic conditions. The use of caffein or the theobromin or theophyllin salts for their general circulatory effects are much more frequently indicated when cardiac stimulation is believed necessary. The body fluids should be increased and maintained by blood transfusions, salt and glucose solutions before, during and after operation. Secondary anemia, if present, should be improved by the various methods available. Starving a patient before operation should be avoided, and when the diet is restricted for any reason the giving of glucose solution is indicated. The work of Mills, Bancroft, and Stanley Brown have demonstrated an increased coagulability of the blood following a high protein diet, while a diet adequate in carbohydrates and fat was not followed by such an effect. It thus seems advisable to place all patients on a low protein diet for the first two weeks following operations within the abdomen or pelvis, in cases of trauma with much tissue mutilation and in cases of phlebitis at all times. Care should be taken to avoid chilling of the patient, before, during, and after operation. The legs and feet must be kept warm, and the local use of heat may be indicated.

Atraumatic surgery is the ideal toward which all surgeons strive. Hemorrhage and shock have a profound influence on venous stasis. The patient's position on the operating table should be made as comfortable as possible, avoiding pressure anywhere which might promote venous stasis, especially in the legs. Harsh and prolonged retraction should not be used and injury to the deep epigastric veins is to be avoided, as thrombosis may start in these vessels. It is better to ligate and divide than to injure veins by puncture, bruising, or overstretching. Mass ligatures are to be avoided, and sutures penetrating veins should be removed and reapplied. Septic wounds should be thoroughly drained to avoid the spread and absorption of septic products.

POSTOPERATIVE MEASURES

During the postoperative stage nothing should be done which promotes venous stasis, such as use of tight abdominal dressings and binders. When gas distention takes place a binder may become too tight. Due to vomiting and diaphoresis the body fluids may become greatly depleted, which necessitates the use of transfusion of blood, salt and glucose solution. Frequent moving and turning of the patient is indicated. The pain produced by the incision may inhibit the normal respiratory excursion; therefore, encourage deep breathing, as the diaphragm is a circulatory as well as a respiratory organ. The inhalation of carbon dioxid at intervals may be indicated. Moderate elevation of the foot of the bed, provided there are no contraindications, during the first twenty-four hours after operation, when activity is at a minimum, might act as a prophylactic measure favoring return venous flow. It is important to frequently check the blood pressure in order to determine whether the pressure normal for the patient is being maintained. Methods to increase body metabolism may be indicated. Doctor Walters gives two grains of desiccated thyroid gland extract three times a day in all cases except those with increased pulse rate and temperature. The medication is begun two to four days after operation and continued until usually the tenth day. If the pulse and temperature are increased, the use of thyroid extract is discontinued. In the series in which thyroid extract was used the incidence of embolism was reduced to .09 per cent. However, all other known methods of improving the circulation were also instituted. As an effective means in reducing the incidence of thrombosis and embolism some surgeons favor early mobilization of surgical patients. Other surgeons believe that this is done at the expense of wound repair. The adoption of systematic light active and passive exercises provides almost all the advantages gained by a shortened stay in bed without interfering with wound repair. These exercises stimulate peripheral circulation, and add much to the comfort and strength of the patient. Meticulous attention to details and close observation that they are carried out is essential.

When thrombosis of the veins of the legs does occur, statistics show that the results are not frequently fatal. Every case must be decided on its own merits. Thrombosis should be suspected when a low elevation of temperature in a clean surgical case takes place, with increased pulse rate with pain in leg or foot, and with increased size of leg as determined by a tape measure. The greatest possible caution is called for to prevent dislodging emboli. This necessitates the gentlest possible handling during nursing care, particularly during the bath and in the use of the bed pan. The leg should be kept elevated on a pillow to keep it warm, and to avoid pressure of the bed clothes. Whatever seemed necessary in the prevention of thrombosis is now reversed for the prevention of embolism. The guiding principle is rest until the thrombus has been anchored by organization. Occurrence of pleuritic pains in the postoperative period should be considered the result of infarction and not a "dry pleurisy," and proper precautions should be instituted.

IN CONCLUSION

The important thing is to recognize the possibility, and even probability, of the development of thrombosis or embolism, and to endeavor to find some practical method for actively combating their development. To recognize a complication at an early stage makes treatment more effective.

701 Professional Building.

DISCUSSION

E. Vincent Askey, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Breyer has summed up very capably the problem which confronts us. He has called to our attention work which has been done on this subject. He has adequately discussed those factors involved in the physical forces predisposing to thrombosis, namely, trauma, infection, stasis or slowing of the circulation, and dehydration.

However, if I understood him correctly, he stated that changes in blood composition cannot be measured readily and that these elements probably play no part in the initiation of a thrombus, but only with the propagation of a thrombus already started. This, I think, is not strictly so, and we differ in this opinion. There have been methods suggested to warn us of impending thrombosis and definite treatments proposed to combat it.

It is probable that in the future more attention will be paid to the biochemical changes found in the blood itself in thrombosis and embolism.

Bancroft and Stanley-Brown have suggested an index of clotting potentiality. This index can be determined in any well-equipped hospital laboratory. They believe it is of as great value in denoting impending thrombosis as is a leukocyte count in an infection. In cases showing a high index of clotting potentiality they advise the repeated use of 10 per cent solution of sodium thiosulphate intravenously. They believe their results show definite value. The effectiveness of the sodium thiosulphate they explain as follows:

In the body tissues there is an oxidation enzyme called glucothione—a sulphur compound. Its action is to lessen the development of lactic acid. Lactic acid results from injury to tissues. Sodium thiosulphate supplies sulphur, which increases the content of glucothione either by neutralization of the lactic acid or by the formation of new glucothione.

Howell has prepared, from dogs' livers, an anticoagulant called Heparin and has used it in thrombosis cases with good results. Rowntree, however, warns us that as yet preparations available are not pure enough to be used without danger.

Recently De Takats has called attention to the marked amelioration of symptoms in cases of frank embolism by the use of papaverine. This drug relieves surrounding vasoconstriction and spasm, and encourages early collateral circulation.

The problem is as yet unsolved. Thrombosis and embolism as postoperative complications constitute a fearsome tragedy in the practice of any surgeon.

Willard J. Stone, M. D. (65 North Madison Avenue, Pasadena). — Every physician who has witnessed the sudden and, in many instances, unexpected death of a patient from pulmonary embolism during convalescence from a surgical operation, will appreciate Doctor Breyer's thoughtful review of the methods which may be used to prevent such a tragic accident.

From the medical standpoint, the circulatory condition of obese patients with slow heart rates and subnormal metabolism may be improved by the administration of thyroid extract during the first ten days of convalescence. Likewise the administration of glycocoll, for its general stimulating action on metabolism, leading to improved circulatory efficiency, may be helpful. The routine use of digitalis during convalescence whenever the heart rate is increased as a result of surgical shock, is difficult to justify from a pharmacologic standpoint. Its use should be limited, as Doctor Breyer has emphasized, to the treatment of auricular fibrillation and cardiac decompensation. With other forms of cardiac insufficiency, especially if the heart rate is slowed, the administration of theobromin or theophyllin salts may be beneficial. Strychnin as a circulatory tonic has gradually become less popular because of the insufficient dosage commonly employed. For patients with slow heart rates who may be believed to be unusually susceptible to thrombotic tendencies, the dosage should approximate one-tenth grain four times daily.

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H. Brodie Stephens, M. D. (384 Post Street, San Francisco).—Doctor Breyer has presented an excellent review of the distressing complication of postoperative thrombosis and embolism. The author in his review rightly emphasizes the frequency of this complication and, because of its frequency, a discussion of the subject is timely.

A careful study and adherence to the principles laid down by Doctor Breyer will undoubtedly frequently prevent this complication; or, if thrombosis does occur, its seriousness will be lessened by adopting the general principles set up by the author.

Notwithstanding the thoroughness of this paper, all will agree, I believe, that there will be still many cases of postoperative thrombosis and even embolism, in spite of whatever we do before or after operation. It appears to me that we have far from solved the problem, and much experimentation and clinical investigation are still needed, if we are to thoroughly understand and prevent this complication so far as it concerns the surgical patient.

Pulmonary embolism has been satisfactorily handled by immediate operation, but it requires a well-trained house staff and a sterile set-up for such an emergency. We have felt this to be a worthwhile routine, and the house staffs are each year given instruction in how to handle this emergency.

⁂

Doctor Breyer (Closing).—I appreciate the suggestions made by the discussers and the emphasis placed on certain phases of the subject, which I could not stress due to the shortness of the paper. The underlying surgical principle of the recommended exercises in the prevention of thrombosis is the effect of muscle action on the venous circulation. We all have made use of this principle, when we ask the donor for a blood transfusion, to open and shut his hand after the trochar needle has been inserted in the median basilic vein.

Dr. Alvin G. Foord, pathologist at our Huntington Memorial Hospital, has stated to me that when the autopsy surgeon of the pathologic service of Dr. Julius Erdheim of Vienna failed to find the source of the pulmonary embolism, Doctor Erdheim would ask if the veins of the calves of the legs had been dissected out and explored. Very often when this was done, the origin of the embolus was found to be there.

Exercises that will cause tensing of the flexors and extensors of the foot, and of the tensor femoris muscle, will produce the desired effect.

WHOOPING COUGH: ITS PROPHYLAXIS AND TREATMENT*

By J. M. Frawley, M.D.
Fresno

Discussion *by A. J. Scott, M. D., Los Angeles; Francis Scott Smyth, M. D., San Francisco; Charlotte Singer Brooks, M. D., San Francisco; Edward B. Shaw, M. D., San Francisco.*

A PROGRAM directed toward the control of whooping cough has been carried on since 1932 in the public schools of Fresno. Two methods have been employed, viz., isolation and vaccination.

ISOLATION

In order to be of benefit as a factor in controlling the spread of whooping cough in the classroom, isolation has to begin at the onset of the cough. This is possible only when the cough-plate method [1] is used to detect early cases.

At the outset of this study, cough plates were made for us by Doctor Krueger at the bacteriological department of the University of California in Berkeley. They were always received in perfect condition, and the exposed plates were returned by mail after incubating overnight. During one school season they were sent to us by Doctor Kellogg from the State Department of Public Health Laboratories in Berkeley, but two years ago a cough-plate station was organized at the Fresno County Hospital, and the plates have been made and read there. They are prepared according to a method recommended by J. J. Miller.

TECHNIQUE

The technique is described in detail by Kendrick, Miller, and Lawson [2] in the American Public Health Association Year Book for 1935-1936:

> A modification of Bordet and Gengou's potato blood agar is made as follows:
>
> Base:
> Peeled sliced potatoes, 500 mg.
> Glycerin, U. S. P., 40 cc.
> Distilled water, 1,000 cc.
>
> Boil the potatoes in glycerin and water until soft. Make up to volume, strain through gauze and allow to stand for sedimentation. Siphon off the supernatant liquid.
>
> To 500 cubic centimeters of clear potato extract add:
> Sodium chlorid solution, 0.75 per cent, 1,500 cc.
> Agar, Bacto, 60 gm.
> Proteose Peptone, 20 gm.
>
> Let stand for fifteen minutes, to saturate the agar. Heat until the agar is dissolved, and dispense in amounts convenient for storage. Autoclave for twenty-five minutes at fifteen pounds pressure (120 degrees centigrade). This base may be stored indefinitely.
>
> Finished medium—To the melted base, at 45 degrees centigrade, add blood to make a final concentration of at least 15 per cent. The blood should be used when fresh, never more than seventy-two hours after it has been obtained. It may be from sheep, horse, or human source, but avoidance of horse blood for the vaccine medium is recommended. Mix the blood with the base by whirling, and pour into plates—about 15 cubic centimeters per Petri plate. Either glass plates or metal boxes may be used.

The potato extract-glycerin-agar base is kept stored in the ice-box, and sufficient Petri plates for a week's supply are made up by adding blood obtained from hypertension cases or from human placentas. The plates are kept in the ice-box until needed.

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* Read before the Pediatric Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

The detection of early cases rests with the school nurse. She must be on the lookout for suspects among the children, who are referred to her each morning by the teachers, and should take cough-plate cultures in all cases where there is any cough, especially in the case of children who are known to have been exposed to whooping cough.

The plate is uncovered and held five or six inches from the child's mouth. Gentle pressure over the trachea just below the larynx will elicit coughing, and after several good expulsive coughs the plate is covered and taken immediately to the incubator. In positive plates the characteristic tiny colorless hemispherical colonies appear, surrounded by a zone of hemolysis. The organisms are described as follows:[2]

> Stained by Gram's method, B. pertussis decolorizes readily—much more readily, in fact, than does H. influenzae. Viewed microscopically, the small, faintly stained coccoid bacilli are scattered evenly throughout the film, occurring singly for the most part, seldom in chains of even two, and not found as pleomorphic threads. Frequently they show bipolar staining.

It takes forty-eight to seventy-two hours for the colonies to develop, and during that time a clinically suspicious case, or one with a history of exposure, must be treated as if positive. It is essential for the school nurse to have not only the coöperation of the teachers, but she must also have the good will of the practicing physician in the community. We have had splendid coöperation on the part of the physicians, and are occasionally called on to furnish cough plates to physicians for use in their private cases.

HOW STATE SUBSIDY FOR SCHOOL ATTENDANCE WORKS OUT

One of the chief obstacles to excluding children with incipient whooping cough lies in the system of granting state aid to schools, based on average daily attendance. Recently a school in Fresno County was closed down completely for a month. So many children were absent with whooping cough that the trustees decided it would be better to close the school than to allow the attendance to fall below a certain level. By keeping the school open with the decreased attendance they would have lost $1,200 of next year's state grant.

This program of early isolation is not new. In Denmark, children are excluded from school during the early catarrhal stage, and allowed to return after the paroxysmal stage has been well established after the cough plates are consistently negative.

Besides the use of cough plates for diagnosis, a second measure which has been tried out in the Fresno public schools, has been prophylactic vaccination of kindergarten children. The opportunity is offered to each new class, and the vaccine given on the written request of the parent.

VACCINATION

The attitude toward vaccine as a prophylactic and therapeutic agent in whooping cough has undergone a radical change within the past few years. The year 1931 seems to have been the turning point. In that year Leslie and Gardner[3] published in the *Journal of Hygiene* their classical study on the phases of hemophilus pertussis. Previously, most of the vaccines used were entirely innocent of antigenic principle.[4]

However, in looking back over the earlier period, the work of Madsen[5] and his coworkers at the Danish Serum Institute stands out as peculiarly in line with the later idea.

Greatly renewed interest in whooping cough research followed the appearance of Leslie and Gardner's work.

Sauer,[6] in 1933, published his successful results of prophylactic vaccination using very large doses of unwashed Phase I organisms grown on human blood enriched by Bordet medium. He has taken the stand that vaccination is effective only when given as a preventive, and not as a curative measure. In his latest review[7] of his own cases, published in the *American Journal of Public Health,* November, 1935, he says:

> Bacillus pertussis vaccine, like typhoid vaccine, is an immunizing, not a curative, agent. A time interval of several months is required for immunization to be complete. About 10 per cent of the children injected with a total of 8 cubic centimeters of the approved commercial vaccine contracted pertussis when subsequently exposed to infection.

Doctor Park,[8] at the meeting of the American Academy of Pediatrics in June, 1935, reported the result of an extensive investigation into the value of prophylactic vaccination carried out by the New York City Health Department with Mishulow's vaccine. This vaccine is made from Phase I organisms grown on sheep's blood agar, with one per cent of sheep-serum broth added on the surface of the medium after inoculation. Vaccines grown in this manner contain, in addition to the pertussis bacilli, a toxic substance which increases the stimulation of agglutinins. Doctor Park concluded that

> The efficacy of pertussis prophylactic vaccination appears to depend primarily upon sufficient dosage.
>
> A group of thirty-eight children were given seventy-seven to eighty-eight billion of the N. Y. C. Vaccine. Five of these were exposed to active cases, and none developed pertussis. Another group of 148 children were given thirty to seventy-five billion of the same vaccine; sixteen of them were exposed and nine developed pertussis, but four of these nine had no whoop, did not vomit, and the cough lasted only two or three weeks. They were so atypical that they could not have been diagnosed as cases of pertussis if they had not been definitely exposed. As the dosage decreased, the incidence became higher.

Kendrick and Eldering[9] in January, 1936, reviewed the work on the prophylaxis of whooping cough being carried on by the Michigan Department of Health. Doctor Kendrick has used a vaccine which is a once-washed ten thousand million per cubic centimeter suspension of B. pertussis, Phase I of Leslie and Gardner, grown on Bordet-Gengou medium enriched with 15 per cent sheep's blood. The organisms are killed with merthiolate 1:10,000 or phenol 0.5 per cent allowed to act at cold-room temperature for a week or more.

A total dosage of 7 cubic centimeters is given, divided into four doses. Out of a large number of vaccinated children, follow-up work has indi-

TABLE 1.—*Summary of Prophylactic Vaccination With Krueger's Pertussis U. B. A. (Commercial)*

Dosage	Number of Children Vaccinated	Exposures		Developed Whooping Cough		Percentage of Failures
8.0 cc.	505	Home	30	Mild	33	
		School	68	Moderate	6	
				Severe	4	
		Total	98	Total	43	44.0%
12.0 cc.	113	Home	9	Mild	6	
		School	12	Moderate	1	
				Severe	3	
		Total	21	Total	10	47.6%

cated that of ninety-five who were subsequently exposed, thirteen (13.6 per cent) developed whooping cough. Of these, nine cases (9.2 per cent) were light or very light.

In an unvaccinated control group there were 128 exposures with 98 (88.2 per cent) cases of whooping cough. Of the ninety-eight cases, nineteen, or 19.3 per cent, were light or very light.

To review, briefly, the Michigan Department of Health reports that, after vaccination, 13.6 per cent of exposed children have developed whooping cough, while Sauer reports about 10 per cent of exposures among his vaccinated cases have developed whooping cough.

FRESNO PROCEDURE

In the vaccination program at Fresno, Krueger's Pertussis U. B. A.[10] has been used. This vaccine* is a solution of endocellular antigen extracted from washed Phase I H. pertussis organisms by mechanical disruption and ultrafiltration.

By this method of preparation, including the thorough washing of the bacterial cells, the toxic filtrate which gives the reaction of Schwartzmann has been discarded with the washings. In a personal communication Doctor Krueger says that:

> Bacterial filtrates have long been known to contain antigenic fractions and to be capable of inducing toxic reactions under certain conditions. It is also true that broth filtrates regularly contain nonspecific and irritating metabolites. I feel that one might well sacrifice some of the antigenic fraction present in the filtrate, in order to avoid nonspecific reactions. That the specific antigen resides in the cell itself is evidenced by the work of Miller, Browne, and McCrea,[11] who showed that the U. B. A. produces complement-fixing antibodies against H. pertussis when injected into rabbits. Similarly, complement-fixing antibodies were produced in children as well as agglutinins and precipitins in some instances, and by Miller and Browne,[12] who were successful in sensitizing guinea pigs with Phase I H. pertussis cultures, so that the classical Schultz-Dale reaction was obtained with pertussis U. B. A.

The first clinical reports [13] published on pertussis undenatured bacterial antigen were promising. The antigen solution used was prepared in Doctor Krueger's laboratory, and the organisms used were recently isolated during a current epidemic and were grown on media enriched with human blood. The commercial product has been modified to some extent, in so far as sheep's blood is used in the culture medium.

This commercial product has been used in a sufficiently large number of cases to justify an evaluation at this time. It has been used as a prophylactic agent before exposure, in prophylaxis after exposure, and therapeutically after coughing has begun.

PROPHYLAXIS BEFORE EXPOSURE

During the last two school years Pertussis U. B. A.* was given as a prophylactic agent before exposure to two groups totaling 618 children. Some 505 children received 8 cubic centimeters, 113 received 12 cubic centimeters. Children in these groups who were subsequently exposed contracted whooping cough in a high percentage of cases, as shown in Table 1.

It must be concluded that in the dosage used, H. Pertussis U. B. A. failed to protect a sufficient percentage. However, as Doctor Park has pointed out, the efficacy of prophylactic vaccination depends primarily on sufficient dosage. The present commercial material contains only 10 milligrams of protein nitrogen per 100 cubic centimeters of antigen solution. It remains to be seen whether protection can be offered when adequate dosage is employed. In order to achieve this result, some means may have to be found of supplying the material in far greater protein nitrogen concentration.

PROPHYLAXIS AFTER EXPOSURE

The published reports on the use of Pertussis U. B. A. as a prophylactic agent after exposure have been summarized by J. J. Miller in a report on H. Pertussis U. B. A. (Krueger) given before the Laboratory Section of the American Public Health Association at Milwaukee, October, 1935. The vaccine he reported was used during the incubation period in ninety-eight cases; 50 per cent developed a cough which, in most cases, was mild or atypical.

This attack rate of 50 per cent of exposures compares favorably with an attack rate of 76.5 per cent of exposures in a group of unvaccinated children observed by Kendrick.[11]

It would seem from the published reports that considerable benefit followed the administration of Pertussis U. B. A. during the period of incubation. The chief objection to its use lies in the large number of daily injections that are required.

THE USE OF PERTUSSIS U. B. A. IN TREATMENT

The use of vaccine in the treatment of whooping cough is based on the fact that the disease is one of prolonged duration, usually taking six to eight weeks for immunity to develop. In such a slowly progressing infection it is rational to attempt to hasten the development of immunity by artificial stimulation of antibody formation.

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* The vaccine was furnished by the Eli Lilly Company.

Table 2.—*Summary of Treatment With Krueger's Pertussis U. B. A. (Commercial)*

Case Age	Treatment Began	Duration Treatment in Days	Dosage	Duration of Symptoms After Treatment Began
1 H. W. 2 years	Five days before onset of symptoms	7	57 cc.	Mild cough for one week.
2 B. K. 8 weeks	Three days before onset of symptoms	8	12 cc.	Severe coughing for one week.
3 B. B. 6 years	Two days before onset of symptoms	8	60 cc.	Mild atypical cough for eight days.
4 B. B. 13 months	Two days before onset of symptoms	13	85 cc.	Mild cough for two weeks. Whooped for three days.
5 S. H. 3 years	Coughing two days	10	27 cc.	Whooped very little for one week.
6 R. W. 2½ years	Coughing two days	6	60 cc.	Mild atypical cough for one week.
7 M. B. 3½ years	Coughing two days	4	20 cc.	Coughed for four days. Six days later took cold; whooped and vomited three days.
8 D. A. 17 months	Coughing two days	5	47 cc.	Mild cough for one week.
9 R. H. 18 months	Coughing two days	5	40 cc.	Cough lasted for three days. Whooped three times.
10 D. R. 2 years	Coughing three days	7	57 cc.	Coughed for one week.
11 C. S. 5 years	Coughing three days	7	33 cc.	Coughed for nine days. Whooped four days, vomited once.
12 B. A. 6 years	Coughing five days	6	48 cc.	Coughed for eight days. Whooped four days, vomited once.
13 C. A. 3½ years	Coughing five days	7	53 cc.	Coughed for eleven days. Whooped five days.
14 E. H. 2½ years	Coughing six days Whooping and vomiting one day	4	33 cc.	Coughed five days. Whooped and vomited three days.
15 B. P. 10 months	Coughing one week	5	10 cc.	Coughed four days.
16 T. F. 20 months	Coughing one week	9	43 cc.	Coughed ten days. Whooped and vomited three days.
17 L. H. 6 years	Coughing eight days	10	48 cc.	Coughed for twelve days. Whooped two days.
18 D. B. 3½ years	Coughing eight days Whooping two days	17	122 cc.	Coughed three weeks. Whooped and vomited severe eighteen days.
19 H. C. 2 months	Coughing ten days	9	14 cc.	Coughed for nine days.
20 A. J. 3 years	Coughing ten days Vomiting three days	11	40 cc.	Twelve days more of whooping and vomiting.
21 A. J. 7½ years	Coughing ten days Vomited once	6	23 cc.	Coughed for six days. Whooped two days.
22 M. H. 4½ years	Coughing ten days	7	53 cc.	Coughed for seven days. Whooped three days.
23 G. E. 8 years	Coughing eleven days	7	60 cc.	Coughed for seven days. Whooped two days.
24 G. E. 5 years	Coughing eleven days	7	60 cc.	Coughed for seven days.
25 P. L. 5 months	Coughing eleven days.	6	28 cc.	Coughed for five days. Two weeks later took cold, whooped and vomited three nights.
26 J. B. Adult	Coughing thirteen days.	5	36 cc.	Coughed for six days. Whooped and vomited for two days.
27 B. H. 1 year	Coughing thirteen days.	9	41 cc.	Coughed for thirteen days. Whooped five days, vomited one day.
28 R. Z. 3½ years	Coughing two weeks Whooping and vomiting four days	5	25 cc.	Coughed for six days. Whooped three days, vomited two days.
29 D. B. 10 months	Coughing two weeks Whooping and vomiting three days	9	68 cc.	Coughed for ten days. Whooped four days.
30 A. S. 3 years	Coughing two weeks	7	29 cc.	Coughed for nine days. Whooped five days, vomited four days.

(Continued on next page)

Table 2.—*Summary of Treatment With Krueger's U. B. A. (Commercial) (Continued)*

31 N. A. 3 years	Coughing two weeks Whooping and vomiting two days	11	78 cc.	Eleventh day of treatment stopped vaccine because of reaction. Whooping and vomiting for seventeen days.
Case Age	Treatment Began	Duration Treatment in Days	Dosage	Duration of Symptoms After Treatment Begun
32 S. P. 3 years	Coughing two weeks	5	14 cc.	Coughed for nine days.
33 F. G. 3½ years	Coughing two weeks Whooping and vomiting two days	5	19 cc.	Coughed one week. Whooped and vomited three days.
34 J. C. 6 years	Whooping and vomiting for two weeks	18	54 cc.	Coughed for three weeks. Whooped and vomited fourteen days.
35 J. W. 5 years	Coughing eighteen days Whooping ten days	8	80 cc.	Coughed for nine days. Whooped for seven days.
36 P. Mc. 18 months	Coughing eighteen days Severe whooping and vomiting three days	9	43 cc.	Coughed for ten days Whooped and vomited six days.
37 D. Mc. 4 years	Coughing three weeks Severe whooping and vomiting	10	68 cc.	Coughed, whooped and vomited for ten days more.
38 B. W. 2 years	Coughing three weeks Severe whooping and vomiting one week	5	25 cc.	Coughed for six days. Whooped and vomited three days.
39 T. P. 5 years	Severe coughing six weeks, whooping and vomiting two weeks	5	23 cc.	Stopped whooping and vomiting in five days.

The logical agent to bring about this objective would be a lysed vaccine. In such a vaccine there is a minimum of alteration of the antigenic properties, and the antibody stimulation begins at once without any preliminary period being required for the liberation of the antigen by bacteriolysis. Krueger's pertussis antigen is a vaccine of this type and, theoretically, meets all requirements. In practical use it has received considerable favorable attention.

To a recent questionnaire, replies were received from 162 pediatricians who had used Pertussis U. B. A. in the treatment of over 3,700 cases of whooping cough, and 104 (63 per cent) reported favorably.

However, in these cases no controls were used; and in a disease so variable in duration and severity as whooping cough, adequate controls, while difficult to obtain, are necessary.

Recently, I have had the opportunity to use the antigen in treatment in a small series of approximately forty cases, using as controls an equal number of cases observed simultaneously in the same schoolrooms, although obviously not from the same families. Large doses were given subcutaneously, 5 cubic centimeters daily or twice daily to children over one year of age, 2 to 5 cubic centimeters to children less than one year. Daily records were kept in both series on the number of coughing spells each night, the number of vomiting attacks, etc.

CONCLUSIONS

While this series is too small to form the basis of any definite conclusions, nevertheless it would seem that, in some cases at least, a modifying influence was exerted. The average duration of coughing for all children receiving daily vaccine injections was 2.7 weeks, with an average paroxysmal stage of 1.2 weeks. In the control group, the average duration of coughing was 6.5 weeks, with whooping and vomiting for 2.7 weeks.

The best results were obtained when injections were begun either during the incubation period or on the first day or two of coughing, or else in the late stages after the disease had passed its peak. There was no certainty about the influence which could be expected when injections were begun during the height of the infection.

SUMMARY

1. Krueger's Pertussis undenatured bacterial antigen (commercial) was used as a prophylactic agent in two groups of children, totaling 618. Protection against whooping cough was found to be insufficient to justify its use in prophylaxis before exposure.

2. In prophylaxis after exposure, and in treatment of early cases of whooping cough, modification of the expected course of the infection followed the administration of large daily doses of antigen. The average duration of coughing in thirty-nine children given injections was 2.7 weeks, with a paroxysmal stage of 1.2 weeks; in an equal number of controls the average duration of coughing was 6.5 weeks, with a paroxysmal stage of 2.7 weeks.

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REFERENCES

1. Chievitz, L., and Mayer, A. H.: Further Investigations on Whooping Cough, Ann. Inst. Pasteur, 30:503, 1916.

2. Kendrick, P., Miller, J. J., and Lawson, G. M.: Tentative Methods for the Bacteriological Diagnosis and Control of Whooping Cough, Am. Pub. H. Assn. Year Book, 1935-1936.

3. Leslie, P. H., and Gardner, A. D.: The Phases of Haemophilus Pertussis, J. Hyg., 31:423, 1931.

4. Gardner, A. D., and Leslie, P. H.: Early Diagnosis of Whooping Cough, Lancet, 1:9, 1932.

5. Madsen, T.: Boston M. and S. J., 192:50, 1924.

6. Sauer, L.: Immunization with Bacillus Pertussis Vaccine, J. A. M. A., 100:239, 1933.

7. Sauer, L.: The Known and Unknown of Bacillus Pertussis Vaccine, Am. J. Pub. Health, 25:1226, 1935.

8. Park, W. H.: Round-Table Discussion on Whooping Cough, J. Pediat., 7:690, 1935.

9. Kendrick, P., and Eldering, G.: Progress Report on Pertussis Immunization, Am. J. Pub. Health, 26:8, 1936.

10. Krueger, A. P., Nichols, V. C., and Frawley, J. M.: Preparation of an Active Undenatured Antigen from Hemophilus Pertussis, Proc. Soc. Exper. Biol. and Med., 30:1097, 1933.

11. Miller, J. J., Browne, A. S., and McCrea, N.: Experimental Hypersensitivity to Undenatured H. Pertussis Protein, Proc. Soc. Exper. Biol. and Med., 32:229, 1934.

12. Miller, J. J., and Browne, A. S.: Antibody Response to H. Pertussis Undenatured Bacterial Antigen. Proc. Soc. Exper. Biol. and Med., 32:449, 1934.

13. Frawley, J. M., Stallings, M., and Nichols, V. C.: A New Pertussis Antigen: Preliminary Clinical Report, J. Pediat., 4:179, 1934. Frawley, J. M.: The Immunization of School Children Against Whooping Cough, J. Pediat., 4:184, 1934. Frawley, J. M.: The Immunization of School Children Against Whooping Cough, J. A. M. A., 103:960, 1934. Munns, G. F., and Aldrich, C. A.: Hemophilus Pertussis Endoantigen (Krueger), J. Pediat., 5:590, 1934.

DISCUSSION

A. J. Scott, M. D. (1401 South Hope Street, Los Angeles).—The use of the Krueger U. B. A. pertussis for prophylaxis is still too new to permit the passing of a positive judgment upon it. This preparation for treatment is apparently not satisfactory because of the large doses, the high cost, and the frequency of doses.

The cough plate method of diagnosis is the most satisfactory, but the technical difficulties of preparation and plate distribution must be overcome before it can be used universally in our private or clinic practice.

Our experience with U. B. A. pertussis is very limited. In the few cases where we have used it for prophylaxis, we have not had any pertussis. We have used it for only two years, and this is too short a time to prove anything. In treatment we have been disappointed, probably because we did not use the large doses Doctor Frawley has used.

In an experience of ten years, from 1925 to 1935, we took 155 cases of pertussis from our personal files. These had no prophylaxis and were diagnosed by blood counts and clinically. We treated them with a stock pertussis vaccine of 7,500 million per cubic centimeter, giving one-half to one and one-half cubic centimeters every other day for three doses. In addition, we used quartz lights and, occasionally, codein. The average amount of vaccine used in 128 cases was 3.78 cubic centimeters per child. The average number of weeks of coughing was 2.36, and the average number of visits was 6.89.

In the California Babies' Hospital, for the same period, we had 2,569 cases. There we averaged 1.75 cubic centimeters of vaccine per child, and the mothers reported improvement in 70 per cent of cases.

We appreciate that pertussis is a variable disease, some years being more severe than in others; also, unless controls are used, as Doctor Frawley says, we can really prove very little. However, we feel that we have had as good results with big doses of stock concentrated pertussis vaccine as have been reported with the more expensive U. B. A. pertussis.

Theoretically, the U. B. A. pertussis is the proper vaccine to use if we are going to use a vaccine. But time and experience will prove whether it is as valuable as the stock H. pertussis vaccine, Phase 1, of our reliable biological laboratories. I hope Doctor Frawley is encouraged enough to continue this work, and to report again what progress he is making.

* * *

Francis Scott Smyth, M. D. (University of California Hospital, San Francisco).—The Pediatric Department of the University of California has been intensely interested in the study of whooping cough. We have learned that it is a more variable disease in its symptomatology than was previously stressed, and were it not for the cough plate many cases, both in adults and children, would go unrecognized. The variability in individual susceptibility, as well as the variation in virulence of the organism, complicate the statistical study of the disease and its prophylaxis. Dr. John J. Miller, Jr., and Dr. Charlotte Singer Brooks have very carefully observed their group of children with sibling control. This method is, of course, more accurate than control cases selected at random. While our earlier studies with U. B. A. were more encouraging, we are not so impressed with the results in this intimate group.

* * *

Charlotte Singer Brooks, M. D. (University of California Hospital, San Francisco).—Doctor Frawley's effort to control whooping cough among school children by the use of the cough plate is very commendable. From the viewpoint of practical epidemiology, the cough plate finds its greatest utility in detecting the early case of whooping cough.

We have been using both U. B. A. and Phase 1 pertussis vaccine in a well-controlled group of children in our pertussis immunization study in San Francisco. The status of Phase 1 H. pertussis vaccine in this group is still an open question. We have not had sufficient exposures among these children to be able to draw conclusions at this time. The incidence of pertussis in our U. B. A. immunized children and control children who have been adequately exposed to the disease has been 100 per cent. The cases of pertussis were of all grades of severity. I believe the criteria of adequate exposure need to be stressed before concluding that immunization is efficacious. Indirect exposure to an early case, or direct exposure to a child late in the paroxysmal stage, may not mean exposure to living H. pertussis bacilli. It is well known that positive cough plates are obtained with difficulty, and often not at all late in the disease. Not until definite standards or criteria of exposure are used, and the status of natural immunity is determined, can conclusions be drawn as to protection of immunized children.

I regret that our experience with U. B. A. in treatment of pertussis cases, well controlled, has been most discouraging. We are not able to confirm Doctor Frawley's splendid results, nor those of Stallings and Nichols, with this agent. The disease in our treated cases was of practically the same duration and severity as in our control cases, regardless of the stage of the disease at which the treatment was instituted. Details of our experience with the therapeutic value of U. B. A. in the treatment of pertussis are to be published shortly.

It is well known that commercial U. B. A. endo-antigen contains very small amounts of protein nitrogen and that there is a variation of the amount in each lot. The lyophil process might serve to concentrate this antigen and standardize its nitrogen content. A study of the therapeutic value of a standardized concentrated U. B. A. antigen would be of scientific interest. However, the results of our experience with the present expensive commercial product make it doubtful whether the additional expense of such concentration and standardization is warranted.

* * *

Edward B. Shaw, M. D. (384 Post Street, San Francisco).—Doctor Frawley has detailed a method for the early recognition and subsequent isolation of whooping cough cases which is perfectly feasible, but which can be accomplished only by means of painstaking care and close coöperation between school authorities, parents, children, school nurses, and physicians. The severity of the disease entirely justifies the labor involved. It should be pointed out, however, that although whooping cough is hardly more than an annoying problem among school children, it is a much more serious one in the home among children below school age, especially infants, and methods of control in the home are of far greater importance than those for the schoolroom.

When one member of a family develops recognizable whooping cough, other members of the family have almost inevitably been exposed and will usually develop the disease in the absence of immunity. Parents and physicians frequently lose sight of the fact that it is worth while to endeavor in every way to diminish the *intimacy of exposure* of well children to those affected with the disease. Cases which develop from intimate exposure (secondary cases in the family) are commonly more severe than is the original. Even though absolute isolation cannot be maintained in the home, every effort should be made at segregation of the ill child, thus reducing the exposure dosage to which other members of the family, frequently smaller children, are subjected.

I am in agreement with the moderation of the author's viewpoint concerning prophylactic and therapeutic use of vaccine. The prophylactic use of vaccine seems commonly to have been accepted with an enthusiasm scarcely justified by the available data. There is no question as to the extreme desirability of a method for immunization, and there seems to be little reason to fear dangerous effects of the vaccine, although the repeated injection of large amounts of the preparation is somewhat of an unpleasant ordeal for little children. The degree and duration of the protection so conferred is, however, most difficult of precise evaluation. There is no simple test for immunity. There is no evidence to suggest that the immunity will be enhanced and maintained by a natural method of immunization. The duration and effectiveness of immunity can be determined only by prolonged observation of the response to natural exposure among large groups of vaccinated and unvaccinated children. There are many variable factors which are most difficult to control. The accumulation of adequate data will not quickly be accomplished, and the widespread employment of active immunization, except on an experimental basis, should be deferred until the questions involved can be answered with authority.

PRACTICAL QUANTITATIVE PERIMETRY*

By David O. Harrington, M.D.
San Francisco

Discussion *by George L. Kilgore, M.D., San Diego; Clifford B. Walker, M.D., Los Angeles; Joseph William Crawford, M.D., San Francisco.*

THERE have been many definitions of the field of vision. Some of them are very ingenious in their method of clarifying a difficult subject, but many of them, although technically correct, are clinically worthless.

By far the most lucid and understandable of these definitions, and the one which best explains and illustrates the problems of modern quantitative perimetry, is that of Traquair.[1] In this definition, the field is imagined as an island of vision surrounded by a sea of blindness.

The island is oval in shape and the coast line rises steeply, as cliffs, vertical on one side and sharply sloping on the other. Above the cliffs is a sloping plateau which rises more rapidly again toward the somewhat eccentrically situated and sharp summit. To one side of this point is a pit (the blind spot) extending down to the level of the surrounding sea.

To an observer situated in the air, above the pinnacle of the summit, a panoramic view of the whole island is presented. Now, conceive of the surface of such a hill as not stationary but subject to slight fluctuations in height, distortion or partial destruction with depressions of every variety occurring on its surface, of all sizes, shapes and depths, and we have a picture of the normal and pathologic field of vision.

CHARTED PERIMETRIC FIELD A CONTOUR MAP

Modern quantitative perimetry is a true *survey* of this hill with all its different levels, dips, and depressions shown by contour lines. Thus, the perimetric field, as charted, is a contour map. It is no longer sufficient merely to outline the coast of this island or very deep depressions in its surface. On the contrary, it is the shallow, barely perceptible indentations which give us the earliest and most valuable information.

In spite of the seemingly complicated nature of this type of examination of the field of vision, it requires in reality only the utilization of a few simple principles and the simplest and most inexpensive equipment. It is, therefore, eminently practical and of the greatest value for routine use in the office of the busy practitioner.

PERIMETRY METHODS

Surprising as it may seem, almost half a century was allowed to elapse after Bjerrum[2] discovered the value of his consulting-room door as a perimeter, before even a limited enthusiasm was aroused by his method. This apathy has persisted in spite of the early recognition of his work by Sinclair[3] and its more full development by Ronne,[4] Walker,[5] and Traquair. It is safe to say that at the present time there are many ophthalmologists, neurologists, neurosurgeons, and others, to whom the accurate charting of the field of vision is of the greatest value, who are not fully cognizant of quantitative perimetry and its possibilities. Of those who use it properly and to its full advantage, there are probably only a handful.

Any attempt to introduce or advocate a method of examination which is cumbersome and lengthy, no matter how excellent theoretically, is bound to end in failure if it has not a highly practical aspect which will recommend it to many men for their routine use.

It was Clifford Walker who showed that quantitative perimetry *could* be a practical method of examination. In doing so, he has gone into the mathematics of tangents, visual angles, distances, time, etc., all of which have been necessary and of great value in the development of the science of perimetry. The complexity of the subject, however, has frightened many men into neglecting it, and yet it is upon this complicated foundation that the present-day clinical methods of field-taking and interpretation are built.

When we speak of practical quantitative perimetry, we must necessarily confine ourselves to a working method which is applicable to all types of cases and which can be used in routine office practice. Walker and Traquair have shown us the way by developing a practical clinical method of perimetry. It behooves all of us to take full advantage of their methods of examination.

For a study of the visual fields, two types of examination are necessary. The perimeter is used to obtain information of the peripheral field and the field for large visual angles, while the more detailed study of the central portion of the field is carried out on the screen.

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* From the Division of Ophthalmology, University of California Medical School.

Read before the Eye, Ear, Nose, and Throat Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

PERIMETER AND SCREEN

The instruments necessary are simple and inexpensive.

The Perimeter.—The perimeter for use at distances of 300 and 330 millimeters may be any one of the various types now on the market at prices ranging from $300 down. An inexpensive arc perimeter with dull black surface, mounted on an adjustable table is sufficient. If one can have the illumination on an arm of the perimeter, it is advantageous but not necessary. Peter's[6] point is well taken when he states that the illumination should be a constant factor and that perimetry should be done in a dark room with artificial "daylight screened" illumination. This applies both to the perimeter and screen, and it is an easy matter, by means of filters and perhaps a rheostat, to measure the light intensity on the surface of the screen or on the perimeter arm by means of a common light meter borrowed for the purpose from the electric company. Once the desired light intensity has been found, the rheostat can be marked with a file and the light kept constant.

The Screen.—The screen, mounted on the dark-room wall, takes up practically no room and is of the simplest design. A frame of soft pine wood, reinforced at the corners, approximately 70 by 70 inches in size, can be made by any carpenter. The size largely depends on the wall space available. On this frame is stretched a sheet of black felt or heavy black cotton velvet. This can be purchased in two-yard widths, unseamed. I prefer not to mark or stitch the surface of the screen in any manner, relying instead on the tangent rule designed by Sinclair for transferring the field from screen to chart. With an unmarked screen, the fixation point may be moved about on its surface for short or tall persons, or from one side to the other in studying scotomatous areas in the region of the blind spot.

Sinclair's tangent rule may be made by planing the figures off a meter stick and marking in the tangent scale in ink. The rule is marked on one side for fields taken at one meter, and on the other side for fields taken at two meters. The stick is then revarnished. Figures for marking this rule may be found in the appendix to Traquair's textbook. It is a most accurate and convenient way of transferring the field from screen to chart.

TEST-OBJECTS

For test-objects those designed by Behrens, obtainable from Meyrowitz of New York, are preferable. These are spherical-headed pins ranging in size from one-half to five millimeters in white, with two-millimeter pins in red, blue, and green. They are sturdily made, and when soiled can be wiped off with a moist cloth, a distinct advantage over the paper discs generally used. Their surface is dull, so that no undue light is reflected from them. For larger objects, dull paper or cardboard mounted on black pins are easily made.

As a test-object carrier, one can cut the point off a Chinese knitting needle and then rub the needle with lamp black, giving it a durable, dull black finish. These needles are made of a fibrous, rather porous reed, into the end of which the test-object pins can be easily inserted.

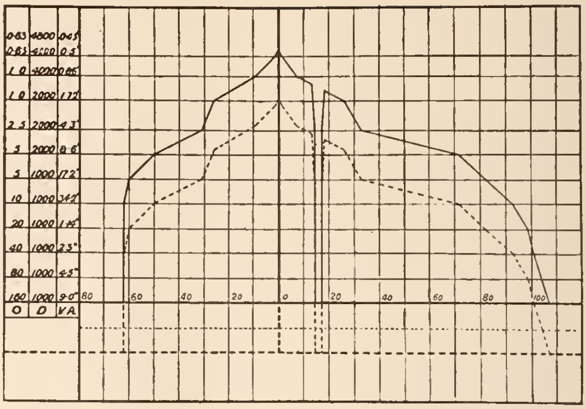

Fig. 1.—Horizontal section of field of vision. (From Traquair.)

A blackened orchestra leader's baton makes an excellent carrier.

I wish to emphasize that it is not necessary to have the best equipment, but that the utilization of simple principles on simple instruments is one of the basic advantages of this method of examination. Indeed, even Peter, who believes that quantitative perimetry has only a limited value and adheres to the qualitative methods of Ferree and Rand,[7] with pre-exposure and testing of color sensitivity, states that "the special advantage of quantitative perimetry lies in its simplicity."

The most easily used charts are probably those designed by Walker. They are accurately printed in terra cotta ink so that the field, when marked, stands out sharp and clear. They should be made of tough paper so as to withstand filing and other rough usage. Their size is a matter of individual preference.

The entire equipment necessary to do good perimetry, including a moderately priced perimeter, screen, lights, test-objects and tangent rule, can be obtained for from $50 to $60—a very modest investment when one considers its value.

STANDARDIZATION OF METHODS

Standardization of methods of perimetry, charting and nomenclature, are things greatly to be desired, and the surest way to accomplish this is to simplify the procedure and equipment so that it is within the range of everyone. The examination should be made in the dark room, with artificial illumination of a standard number of foot candles. The seven-foot candle-power of Ferree and Rand may be used on perimeter and screen, and is easily obtained and maintained constant. Test-objects should be clean and graduated in millimeters, and should be so noted in charting. Thus, Traquair's method of charting the size of the test-object as the numerator of a fraction, and the distance from screen or perimeter as the denominator, will tell at a glance the method of examination used. Any number of contour lines or isopters may be transferred to a single chart,

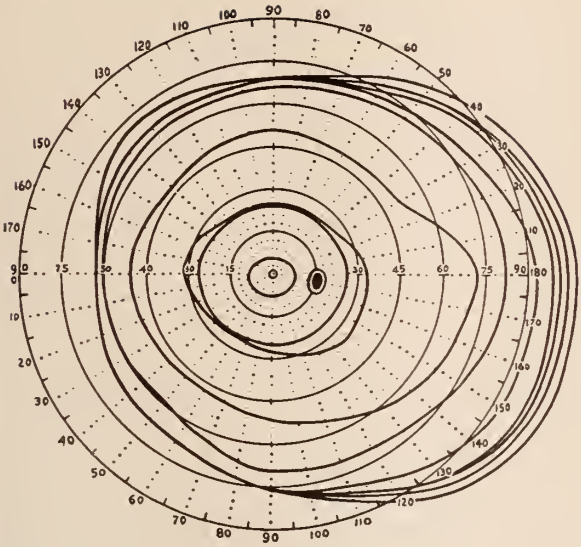

Fig. 2.—Plan of the visual field showing the same Isopters as in Figs. 1. (From Traquair.)

each with its appropriate notation. In this way the field picture in quantitative form may be seen at a glance.

SET ROUTINE DESIRABLE

In outlining a method for taking fields, it is well to follow a set routine designed to get the most out of the field in the minimum of time and with the least effort.

Examination on the perimeter, important as it is, may be delegated to a well-trained nurse. Here we are working with relatively large objects at short distances, *i. e.,* the visual angle subtended is large. We are outlining only the periphery or the coast line of the hill of vision, and the procedure is more or less of a mechanical nature. The examination takes from five to twenty minutes, depending on the complexity of the field. The nurse, unacquainted with the provisional diagnosis and unaware of what field changes to expect, proceeds in a routine manner, using first a three-millimeter object at the usual distance of 330 millimeters, and taking readings on 8 meridia. If defects are found, they are tested with larger objects to determine their density and, if possible, to throw some light on the character of the defect. In this manner the perimetric fields may be examined in every case and often unsuspected defects are found.

Examination on the screen need not be a routine procedure in every case, but should be made wherever there is any reason to suspect a field defect. Thus, whenever the corrected visual acuity is below normal, search should be made for scotomata, enlargement of the blind spots or defects in isopters for small visual angles. Because of the elasticity of the test, it must be performed by the doctor; but in no case should a single examination take more than twenty minutes for each field. It will often be found possible to do it in much less time than this. Examination of the field, like refraction, must not be unduly prolonged or it loses all of its value. The patient becomes fatigued and often irritable, and this is true not only of neurologic cases but also of perfectly normal patients.

Having already had his field taken on the perimeter, the patient is aware of what is expected of him. A few well-chosen instructions as to fixation will put him further at ease. He should be allowed to see the test-object on the end of the pointer and then, as a further test of his concentration, and intelligence, his blind spot is quickly found and outlined. The size of test-object with which to start is determined largely by the patient's visual acuity. This is a matter of experience, and can be judged very quickly after a few trials.

In cases where central vision is 20/40 or better, I usually start with a 2-millimeter object at 1,000 millimeters, or a 3-millimeter object at 2,000 millimeters. After outlining the blind spot to determine its size, and whether or not there are any prolongations present, peripheral limits of the four principal meridia are then found for this object. The object is moved from blind to seeing area; and, having determined these four meridia, the object is moved in a circular fashion around the screen and just inside the previously determined peripheral limits. At any point at which it disappears, a pin with a dull black head is stuck in the screen as a marker, and another to mark its return to the seeing area.

If no defect is found, a smaller object is used, usually one millimeter, and this is carried in to the center on each meridian. When areas or quadrants of blindness are found, these are carefully outlined, both radially and in a circular manner, with large and small test-objects. In this way, what may at first have appeared as an isolated scotoma can often be traced to a connection with the periphery or the blind spot, or both. What may seem to be a quadrantopsia with one test-object will, with another, show up as a large arcuate scotoma.

With the field outlined for one eye with black-headed pins, the other may be designated with pins of a dark gray color. At the end of the examination it may be transferred immediately to the chart with the help of the tangent rule, or may be left on the screen until leisure permits its recording.

In cases where one has good reason to suspect a very small defect in the central portion of the field, or where amblyopia due to tobacco and alcohol is present, colored test-objects may be used. It is somewhat doubtful whether these are of value when used beyond 10 to 15 degrees from fixation. In the peripheral areas of the field more information is obtained by reducing the visual angle for form. In minute central scotomata, however, such as those seen in the early stages of senile macular degeneration or in the amblyopia exanopsia found in a squinting eye, the use of two-millimeter red, blue, or green test-objects is often of great help.

Except in very complicated field defects or in patients whose cerebration is very slow, all of these tests may be done in a relatively short time. In spite of short cuts, one can develop a surprising degree of accuracy and obtain important and valuable information. As stated above, the detailed research type of perimetry advocated by Ferree and Rand, and by Walker, is not necessary for practical clinical perimetry.

In the quantitative method the arc perimeter and the Bjerrum screen are used as part of the same examination, supplementing each other, no matter what the type of defect may be.

IN CONCLUSION

Our problems in ophthalmology have been vastly simplified by the development of a highly accurate method of functionally testing the visual sensory apparatus.

The equipment necessary is simple and inexpensive.

The examination is not difficult nor unduly time-consuming, *i. e.*, it is clinically practical for routine use by the busy practitioner.

Quantitative perimetry is as important a part of the subjective examination of the eye as ophthalmoscopy is of the objective examination, and when properly conducted gives as much information.

This examination should be a routine ophthalmic procedure in which a definite standard of illumination, test-objects, charting, and nomenclature should be adopted.

Because the method offers so much valuable information, this paper has been presented with the hope that it may encourage more ophthalmologists to adopt as a routine office procedure a simplified and practical quantitative perimetry.

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REFERENCES

1. Traquair: Introduction to Clinical Perimetry. London: Henry Kimpton, 1931.

2. Bjerrum: Tr. X Inter. Nat. Med. Congress, 10:66-79, Berlin. 1890,

3. Sinclair: Tr. Ophth. Soc. U. Kingdom, p. 384, 1905.

4. Ronne: Arch. f. Augenh., 78:284, 1915.

5. Walker: Arch. Ophth., 46:537, 1917.

6. Peter: Principles and Practice of Perimetry. Lea and Febiger, Philadelphia, 1923.

7. Ferree and Rand: Psychol. Rev., 29:457, 1922.

DISCUSSION

George L. Kilgore, M. D. (625 Bank of America Building, San Diego).—We should be deeply grateful to Doctor Harrington for bringing the subject of practical quantitative perimetry to us in such a clear, concise manner. If I interpret the meaning of this paper rightly, it is to place emphasis not so much on the need of a very thorough technique in the taking of perimetric fields and in doing tangent screen studies, but to stimulate and encourage a more frequent routine use of these adjuncts to a better diagnosis. No one can deny the need of this encouragement and stimulation. I shall repeat the statement that many ophthalmologists, not particularly interested in the neurologic aspects of the specialty, have a fear of the problem on account of its apparent complexity, and seldom do even a rough examination of the visual fields.

A thorough history in all cases in which there are symptoms relative to a central nerve-system disorder is most important. The ophthalmologist should be on the alert for any symptoms, for we all know that it is impossible to make a correct diagnosis of these lesions without an exhaustive study of the fundi and visual fields. The study should be based on a thorough knowledge of the central nerve system diseases, arising from local intracranial and spinal lesions, general disorders, and toxic disturbances. The finding of symptoms such as headaches associated with nausea, nausea and vomiting, skin areas with abnormal sensations, auras with defects of smell, etc., and symptoms referred to the extremities, should be followed with the most thorough perimetric and tangent screen tests.

I shall repeat, for emphasis, the necessity of obtaining a complete coöperation of the patient in carrying out the work. I have found that most patients require some instruction as to the purpose of the tests, along with an actual application of the several phases of the technique. They respond much better to several trials rather than a prolonged examination. In this manner, the patient is usually mentally fresh, somewhat limiting the fatigue element.

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Clifford B. Walker, M. D. (427 West Fifth Street, Los Angeles).—To Doctor Harrington we are indebted for a most excellent paper, which I believe represents a praiseworthy attempt to put perimetry on a more available, perhaps even routine basis.

As far back as 1921[1] I first also attempted to set forth in a somewhat similar paper how easily quantitative perimetry could be managed. I apparently waived the fact that I had already been giving the general subject of perimetry very special attention for ten years. I naïvely assumed that my readers had a preliminary education (or experience) somewhat similar to mine and would be eager, willing and *able* to run about gathering the numerous necessities described. I found that this assumption was rarely true. In the course of time my viewpoint gradually changed, until recently I seem inclined to remark: "There is no royal road to neurological ophthalmology, commonly called perimetry."

Perhaps a hasty field is better than none. Yet a rapid fruitless field may permit, let us say, for instance, an early undiagnosed pituitary case, to say, "Yes, my fields have been taken and they are all right." If further work is thus inhibited, a costly sequel may later result.

One constant characteristic of the field that turns out to be worth something, in a diagnostic way to the doctor and the patient, is that it took time to make the examination and permanently record it.

In a way, Doctor Harrington seems to intimate that the nurse or technician first makes a complete perimetric record in five to twenty minutes, using test-objects from 3/330 up if necessary on eight meridians, screen work being waived in most cases. This routine might seem a dangerously close approach to the action point of a law of diminishing returns.

If I had to pass routinely in five or twenty minutes on the functional normality of many retinas, I believe more loopholes would be closed by reversing the procedure. That is, test the blindspot first in order to judge the values of the answers, then outline the 26-degree normally round critical field of the 1/2000 test-object, and then ophthalmoscopically examine the peripheral retina if no more time is left for the perimetric work. This much can actually be recorded in twenty minutes. and will more safely obtain higher percentages of valuable information, because if this critical test, as I call it, is not passed, more time, often over an hour, may be spent in completing a quantitative perimetric record of diagnostic value.

Time permitting only a closing remark, may I merely note that velvet is very apt to glisten undesirably in the light and is more likely than felt to tenaciously hold whitish specks of lint, etc., quite difficult to brush off.

Again, time savers should not overlook the fact that, with Doctor Harrington's unmarked screen, much time in recording is necessary. In his description no accuracy of measurement is stipulated as regards meridians. Guessing them may result in mistakes of five or more degrees if done hurriedly. He directs the perimetrist to go to Traquair and find out for himself what numbers to put on his one-meter ruler after he has skillfully planed the ruler bare to receive them. Yet I find no mention of the protractor necessary to lay off each meridian with the same accuracy with which the distance from the center is recorded. Perhaps it may be fair to state that our perimetrist will have to do a little hunting before he gets a time-saving protraction to fit his planed, perhaps varnished, ruler. Then there will be the plumb bob or level which must be used for real accuracy in establishing the vertical or horizontal meridian as a starting point. Personally, I have long since had enough of time-wasting rulers and protractors in quantitative perimetry; they do not fit the twenty-minute picture unless several of the said eight corners are cut, or accuracy is otherwise allowed to become the weak link.

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[1] Walker, Clifford B.: The Value of Quantitative Perimetry in the Study of Post-Ethmoidal Sphenoidal Disease Causing Visual Defects, Boston M. and S. J., Vol. 185, No. 11, pp. 321-326 (Sept. 5), 1921.

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Joseph William Crawford, M. D. (490 Post Street, San Francisco).—Perimetry furnishes a functional test of the entire visual sensorium from the brain to the end organ, or retina. An objective examination of the visual tract *in vivo* is for the most part impossible. Disturbances in function of such a highly organized structure precede, as a rule, recognizable alterations in its architecture.

The only instruments necessary are an arc perimeter and a tangent screen, the former to define the peripheral limits of the visual field; the latter to study more minutely the central and paracentral field. No ophthalmologist or neurosurgeon should limit himself to either instrument, but should use one to supplement the other. The tangent screen, devised by Ferree and Rand, which may be attached to their perimeter, is a very good one; but for routine use in the office or clinic, a large one, such as that described by Doctor Harrington, or the one described by Clifford Walker, is more useful. One other instrument that deserves wider use is the small hand campimeter devised by Peter. For patients too ill to be moved about, and for rapid routine office and clinic work, it furnishes accurate information with a minimum loss of time and effort.

The usual procedure with the tangent screen is to use a form stimulus subtending the smallest visual angle easily recognizable by the patient and, in addition, stimuli of different colors, usually blue, red, and green. The purpose of the test is to determine the "point in the field at which the stimulus in question is of threshold value for the light and color sense" (Ferree and Rand).

Stimuli of different colors are advocated because of their increased sensitivity in slight pathologic alterations; but there is undoubtedly also a special and differential susceptibility for colors in pathologic disturbances. Peter points out the fact that the blue field suffers first in nutritional disturbances, affecting the neuro-epithelial layers of the retina; whereas the green and red fields suffer first in disease of the nerve fibers.

All of us have observed the early and complete disappearance of the green field in tobacco-alcohol amblyopia, with preservation of the blue field.

A modification of the method described above for studying the central and paracentral field, is the method termed "quantitative perimetry." The technique of this method has been described by Doctor Harrington and consists essentially in substituting for the color stimuli, white stimuli of various sizes. Advocates of this method argue that a decrease in the size of the stimulus increases the sensitivity of the perimetric method; but, as Ferree and Rand have pointed out, "such extremely small stimuli are sometimes used that they are more properly test-objects for visual acuity than for the sensory process." They recommend, rather, that form stimuli be used only until the level of visibility of the color stimuli is reached. Beyond this point color stimuli are more informative.

No ophthalmologist or neurosurgeon can afford to limit himself to either quantitative or qualitative perimetry, for each has its sphere of particular usefulness. No one can gainsay the value of quantitative perimetry in neurologic cases. The information gained from neurologic patients by using color stimuli is of no more value, certainly, than that obtained by using small white test-objects; and as it calls for more intelligence and coöperation from people who are obviously quite ill, it is probably less trustworthy.

However, most ophthalmologists who have to deal with many more cases of ocular disease than neurologic disease, will get more valuable information from a routine study of the visual field, using form and color stimuli, than from a study confined to the use of form stimuli alone.

SILICOSIS*

By Philip H. Pierson, M.D.
San Francisco

Discussion *by W. P. Shepard, M.D., San Francisco; L. Henry Garland, M. D., San Francisco; Munford Smith, M. D., Los Angeles.*

So much has been written on silicosis from its historical and clinical manifestations that I will not go into detail on those phases, but will discuss some of the conditions which have led up to the "racket" which now exists in this field and some of the means at our disposal, as physicians, to help control it.

What are some of the factors which have produced this state of affairs? There are numerous causes, but I will mention only the following: (1) An increasingly large field in industry, where silica or silicates play a part—mining, quarrying, sandblasting, manufacture of polishes, molding, glass making, tunneling, besides the asbestos and talc industries. (2) More widespread appreciation of the presence of dust-borne diseases and their differentiation from tuberculosis. (3) An unrest among "Labor" because of working conditions or wages, which has led them to attack "Capital" in the form of suits for damages, some of which are justifiable and some not based on true facts. (4) Unscrupulous or misinformed lawyers and doctors have been led to plead and testify in cases called "dusty" without knowing the true facts about silicosis, but acting on presumptive knowledge.

AN INDUSTRIAL PROBLEM

It has been said that 500,000 workers are exposed to silica and potentially each of these persons is subject to silicosis. It, then, does constitute a problem worthy of our consideration. And perhaps the fact that our attention has been particularly focused on it is a blessing in disguise. In California, and a few other states, silicosis is a compensable disease. Our laws at present are so worded that a workman may and must apply for compensation insurance within a period of six months from the time that he has symptoms referable to this disease. By the time symptoms have appeared the condition must have been present for some time, and it is likely that disability will be progressive thereafter. The problem facing the insurance companies is to charge rates sufficiently high to cover all probable liabilities, and all employers within a given industry must pay approximately the same rates. In view of the fact that the development of silicosis may be delayed for months or years after an employee leaves one position, a new problem is added; for previous exposures in dust hazards are proportionately liable, and the employee may exercise his right to compensation some time after premiums cease to be paid. Wet mines or those relatively free from dust have had to suffer equally with the dusty ones. A type of voluntary annuity insurance might be devised from the wealth of actuarial statistics relative to the length of exposure to certain concentrations of dust and the consequent development of silicosis, so that men could be moved from a dangerous exposure before disease developed; and from the dividends so obtained establish themselves in less dangerous occupations.

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* From the Department of Medicine, Stanford University.

Read before the General Medicine Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

"Labor" will be very reluctant to enter into any plan of periodic physical examinations of the workers if the object is to expel them from their positions. This has a very meritorious argument in its favor. Workers who are found to be suffering from silicosis, even in its earliest recognizable stages, should be transferred to other phases of the work where they will be safe.

The insurance companies have another problem to contend with, namely, defending themselves against unscrupulous or misinformed litigation; in other words, the "racket." We might define this sort of racket as a situation in which many false claims for damages follow in the train of a relatively new field where danger has been discovered, and where rightful claims amount to considerable sums of money.

A MEDICAL PROBLEM

And now, from the physicians' point of view, what are our problems? We are called upon to examine men, evaluate their history as to exposure in so-called dusty occupations, interpret the roentgenograms and other laboratory data, and give an opinion as to whether disease—silicosis—exists. Under our present system this entails many difficulties, chief among which are: (1) what do we mean by the term "dusty"? and (2) the differentiation of silicosis from tuberculosis and other diseases causing a pulmonary fibrosis.

THE PROBLEM'S SOLUTION

There is no doubt that a tremendous danger lurks in those industries above mentioned where the laboring man is exposed to high concentration of fine silica dust over long periods of time. And even with the knowledge that we have at hand, I think this does not present an unsurmountable problem. If an epidemic of scarlet fever, typhoid, or smallpox breaks out, our Boards of Health know the sources and put into operation at once the machinery to stop them. They are also aware that without proper precautions such epidemics might easily occur today, and these preventive measures are strictly enforced every day without our even giving them a thought. To handle the silicotic problem we must likewise know the source or sources from which dangers arise, and meet these dangers with modern medical and engineering skill. And not only must they be met once, but we must meet them constantly if the hazard is to be removed.

Of all dusts encountered in industry those considered most dangerous are silica and certain silicates, such as asbestos and talc. What are the qualifications which determine whether such exposure is harmful or not? From the investigations made by the Bureau of Mines and other commissions, we know that it is dependent upon (1) the total number of dust particles per cubic foot, (2) the size of these particles, (3) their mineralogic and chemical composition, (4) the length of exposure, and (5) the presence of concomitant gases. No industry should be termed harmfully "dusty" without first knowing these facts.

The harmful factors in this dust hazard are silica, certain silicates, and gases. So far it has not been proved that serocite is a harmful silicate, but asbestos (magnesium iron silicate) and talc (hydrous magnesium silicate) have been proved to be dangerous. Furthermore, we know that particles less than ten microns are the ones taken up by the phagocytic endothelial cells and carried through the lymphatics, and that larger particles are generally expelled from the respiratory tract by the ciliated epithelium or caught in the upper respiratory tract, and thus do not enter the lungs.

WHAT MUST BE KNOWN

First of all, how are we to know whether a mine, or factory, or industry is a menace from this point of view? Reliable dust counts made where the person is employed, and at a level of the worker's mouth, is most important. This analysis is a highly technical procedure, and must be done by a chemist trained in this field. At present the Greenberg-Smith impinger is the most accurate instrument for making these counts. As the very fine, invisible particles may be thrown high in the air when work is first begun, it is wise to make correlating counts some hours later. In the counting of the particles we must know how many are present per cubic foot and the percentage that are under ten micra. An analysis of the rock or substance used should also be made, and all its components quantitatively known. The dust inhaled may not be in exactly the same proportion as in the original material, and so it is necessary to analyze the dry or wet settled dust collected from ledges or rafters. That data, taken in conjunction with the dust count, tells us the size and number of particles of the minerals inhaled. From the statistics compiled by many surveys it is known that the hazard is in proportion to the number of fine particles, their composition, and the length of exposure. Quoting from the Pennsylvania Surveys, Anthraco-Silicosis, 1934: "Employment in an atmosphere containing less than fifty million dust particles per cubic foot would produce a negligible number of cases of anthraco-silicosis when the quartz content of the dust was less than 5 per cent. In the gangways, where the silica content of the dust was about 13 per cent, a safe limit appeared to be ten to fifteen million particles per cubic foot. The limit of tolerance for rock workers was set tentatively at five to ten million dust particles per cubic foot of air."

The chemist should also make a determination of the gases present in the environment of the workers. Banting, in his recent observations, has shown that nitrous acid and sulphur so irritate the normal lining of the bronchopulmonary tree that silica crystals are more readily absorbed, and hence disease develops more rapidly.

The second analysis should be of the workers. This means not only good stereoscopic roentgenograms intelligently interpreted, but examinations of the workers—a history of past exposure to dust (and its type), acute and chronic respiratory diseases, and evidence of tuberculosis. (An interesting and helpful survey might well be made of the incidence of tuberculosis in the population of the community where the miners live, as in such a community a large proportion of the inhabitants work in the mine; and the tuberculosis hazard may thus be estimated.) The examination should include a complete study of the respiratory tract. A simple exercise test (the chair test) is helpful in determining the cardiac and respiratory reserve. Expansion of the thoracic cage and excursion of the diaphragm in the fluoroscope will aid in determining the amount of emphysema resulting from the pulmonary fibrosis. It is well known that fibrosis from a dust exposure may not make its appearance for some time after the exposure. Severe respiratory disease often greatly accelerates the development of the fibrosis. These are reasons why it is unfair to the worker to place a time limit in which he may make a claim.

If these two examinations are made correctly they should check each other, for if serial examinations of the men show the development of silicosis in the face of a negligible dust hazard, it is evident that the men have been previously exposed or that the count is inaccurate. This statement implies the necessity for periodic examinations, every six or twelve months, of the men and the dust. If a dust hazard is found and corrected by water properly applied, better ventilation, opportune time of blasting, and so forth, subsequent dust counts will show this improvement.

A very important phase of this problem must be carried on by the pathologist. As has been said, the difficult case to accurately diagnose is the one where the exposure has been relatively short and the fibrosis has not developed beyond a slight degree. Pathologic and mineralogic analysis of these lungs at autopsy will go a long way in determining the type and amount of disease present so that roentgenograms may be more accurately interpreted.

REPORT OF CASES

As examples of testimony given without sufficient knowledge of these underlying conditions, may I cite from two industrial cases I recently studied:

Case 1.—A man had been employed as a machinist, and his duties involved trimming steel objects on a lathe. Rather suddenly he developed cough, expectoration, shortness of breath, and loss of weight. X-ray examination of his lungs was made and he was sent to a tuberculosis sanatorium, where tubercle bacilli were found in his sputum. After a few months of improvement he left and came into the hands of a good physician, who felt that his "dust" exposure might be a factor. Other x-rays were taken and presented to several roentgenologists with this story, especially the dust phase of it, and many rendered the opinion that he was suffering from "pneumonoconiosis or silicosis." An analysis of the dust disclosed 2 per cent silica, and the counts ranged from 1.6 to 2.8 million particles per cubic foot. One roentgenologist went so far as to state, "The x-ray appearance is typically that of pneumonoconiosis, and this diagnosis can be made without the clinical findings and occupational history, but the latter is confirmatory evidence."

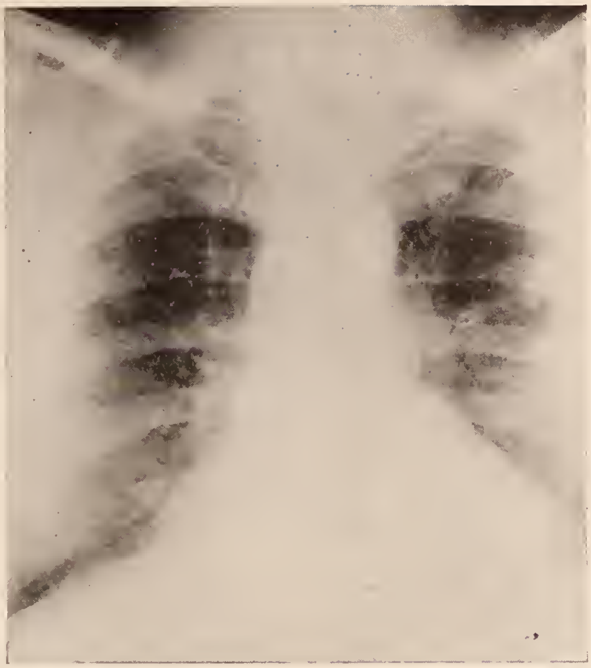

Fig. 1.—Mr. W.—Asbestosis. Note fine diffuse linear thickening giving ground glass appearance

This is an example of what I mean by presumptive evidence. The difficult cases to properly evaluate are not so much the late cases where silicosis is definitely established by a long history of exposure and roentgen shadows which appear quite typical of silicosis, but in the earlier cases where a diffuse fibrosis exists with a shorter period of exposure. Many conditions may cause a diffuse fibrosis—tuberculosis, chronic bronchosinusitis, bronchiectasis, chronic pneumonia, and so forth. It is here that research into the pathologic study of these cases is greatly needed.

* * *

Case 2. — My second example illustrates a mistake I made a few years ago. A patient of mine had had thirty-two months' exposure to silica dust in a plant where enameled tubs and bowls were made. In this industry, sandblasting and emery-wheel grinding were frequently employed. The man had a tuberculosis which was treated by artificial pneumothorax. A diffuse, fine fibrosis was present in both lungs, and in places a fine nodulation. After considerable hesitation and study, I came to feel that perhaps this was evidence of the irritation from the dust he had inhaled. He died and we made an examination for silica in his lungs, which showed no more than is found in normal individuals. Consequently, I had to admit that my diagnosis was wrong.

Much light would be thrown on this type of case if more such studies could be made. I cannot emphasize this point too strongly, and hope that wherever such opportunity arises specimens of lung tissue will be submitted to mineralogic and pathologic study. I have recently heard of a case where the diagnosis of siderosis was made because some iron particles were found in the lungs. It is the feeling of those best informed that iron in the lung produces some pigmentation, but very little fibrosis, and that there is not a particular predisposition to tuberculosis.

TABLE 1.—*Mr. W.—Summary of Industrial and Clinical Data*

Name Age Sex	Length of Exposure	Location of Exposure	Previous Dust History	Past History Respiratory Disease	Past or Family History Tuberculosis	Physical Examination Respiratory Tract Chest Expansion Chair Test	X-rays
W. 58 M.	Twenty-five years, forty hours a week, plant superintendent in asbestos department four to five hours a day. This is equivalent to 12½ years' constant exposure.	Zones 1, 2, 3, 4, 5. Dust counts 4-25 million particles per cubic foot. 80 per cent less than 10 micra. 84 per cent asbestos.	Kesby and Mattison Counties. "Roustabout in clean and dirty rooms."	Typhoid pneumonia at 18	None	Weight 186½. Eyelids puffy and injected; nose, poor space. Heart, negative. Lungs, diminished breath sounds throughout; at left apex, increased whisper and a few râles. Blood pressure, 160/94. Fluoroscopy, general haziness throughout both lungs with enlarged hilar glands. Diaphragm, right, 1 centimeter; left, 2 centimeters; chest expansion, 1 to 2 centimeters. Chair test, 25 steps. P. R. Before exercise .... 92 20 After exercise .... 124 24 After two minutes' rest........ 108 24	Moderate enlargement of heart, increased diffuse granular peribronchial markings throughout both lungs. More pronounced in lower lung fields. Coalescing larger areas in left lower lobe. Diagnosis: Evident asbestosis in both lungs.

COMMENT

With all these points in mind I feel that we, as physicians, should be much more careful in stating in a given case that a patient is suffering from silicosis, and before rendering such an opinion we should know the length of exposure, the minerals involved, the type of dust hazard and its specific reaction, and that we should not make statements or give opinions which carry considerable weight until we know as much as can be determined in each individual case.

If such surveys as these were started in all dusty industries, would we not lay the foundation for more accurate knowledge and, what is of more importance, greater safety for the worker? This, as I have said, would mean lower insurance rates, and in these factors I think both Capital and Labor would profit. Why spend time and money building up reserves against damage suits when a great many would be averted by healthier working conditions? Is there not an opportunity and need for a responsible, unprejudiced institution to which such problems as dust hazard and health surveys may be brought and from whose findings sanitary engineers could, by their skill, work out their solution? An accurate foundation must be laid, and the sooner it is done the sooner will the rightful case receive proper recompense. Moreover, it will stop the "racketeering" where silicosis does not exist.

Labor will not coöperate in any plan of physical examinations of workers if the purpose of the same is to discharge men when early or more advanced fibrosis is found. The employers must prepare themselves so that when employees with disease are found they may be transferred to other occupations free from the dust hazard. This type of mutual assistance will help the employer by keeping his workmen fit, and it will appeal to the labor organizations, for their men will be continued at some type of work which is safe.

IN CONCLUSION

In conclusion, may I illustrate some of these factors in an analysis I recently made of an asbestos factory. Six workers were examined in the manner illustrated in the chart on the tripod. Dust counts were made in different parts of the factory where exposure was taking place, and it was found that they varied from six to twenty-four million particles per cubic foot, and that the dust contained 84.48 per cent of asbestos, 80.36 per cent of the fibers being less than 10 micra in length. One employee had definite asbestosis, one was questionable, and the others were given a clean bill of health. By a better enclosure of the saw which caused the dust, this hazard was reduced to one employee, who could be properly protected, and their liability was minimal. A base line for the health of their employees was established, which will be of great assistance in comparison with the subsequent periodic examinations and dust counts.

SUMMARY

Silicosis (as a compensable disease) has become a "racket" because of many factors, chief among which are the lack of accurate knowledge as to the working conditions in certain industries and the loose use of terms based on presumptive knowledge.

It is possible to properly evaluate the hazard of silicosis by reliable dust counts, and competent and intelligent medical and roentgen examinations.

These complete examinations must be repeated periodically to determine whether the hazard has been removed and whether the health of the worker is such that he may continue in his occupation.

Replacement in less hazardous positions must be a part of the program if Labor is to be fully coöperative in this plan.

Actuarial statistics may be used to promote a type of insurance which will act as an annuity for those who change their work before trouble develops and thus make the transition from one occupation to another an easier procedure.

490 Post Street.

DISCUSSION

W. P. Shepard, M. D. (Metropolitan Life Insurance Company, 600 Stockton Street, San Francisco).—We must admit that Doctor Pierson has called our attention to one of the most urgent problems confronting industry and medicine in this State today. Like many industrial-medical problems, there is much confusion both in medicine and industry concerning silicosis—a clinical entity about which we have considerable knowledge. There is pressing need for each of us who come in contact with the dusty industries to impart the following facts:

1. Silicosis is a disease caused by the prolonged inhalation of finely divided silica dioxid. It is probably only produced when such silica dioxid exists in the air of the working space in amounts in excess of twenty million particles less than 10 microns in diameter per cubic foot of air. It usually requires prolonged exposure to such concentrations before the disease is produced, perhaps at least two years. In this connection, it is well for us to remember some of the peculiar physical properties of such small particles: (*a*) they do not settle, but will remain suspended in air for a long time; (*b*) they are invisible to the naked eye, so that even in the presence of strong light the air may look clear; (*c*) these particles are not always controlled by water. Wet-drilling only partially solves the problem. This is due to the fact that the surface tension is so great, compared with the weight of the particle, that water will not adhere to the surface.

2. Silicosis, caused by the inhalation of large numbers of finely divided particles of silica dioxid over a considerable time (*a*) predisposes to tuberculosis; (*b*) can be diagnosed before tuberculosis is superimposed; (*c*) and disability can usually be prevented by prompt removal from exposure at early stages. This involves careful periodic physical examination, including x-rays taken by special technique and read by experts with a view to finding the first-stage silicosis cases.

3. Silicates: Only asbestos produces a pulmonary fibrosis which may cause disability. The other silicates have not been shown to cause appreciable pulmonary disease. Asbestosis, as far as we know today, does not carry with it the same predisposition to tuberculosis as silicosis.

4. The dust hazard in a given industry can always be measured, and can usually be controlled.

* * *

L. Henry Garland, M. D. (450 Sutter Street, San Francisco).—The importance of reliable dust counts has wisely been stressed by Doctor Pierson in his very valuable paper dealing with certain aspects of silicosis. As physicians, our first problem in dealing with silicosis is to diagnose it properly. The diagnosis of silicosis is based (1) on the history, (2) the clinical findings, and (3) the roentgen findings. With properly made and interpreted roentgenograms, the roentgen findings constitute the strongest link in the chain of evidence, and the clinical findings the weakest link. However, we heartily agree with Doctor Pierson that the diagnosis of this condition can rarely be made solely on the roentgenograms. It nearly always requires the concomitant history of definite exposure to hazardous concentrations of silicious dusts.

As an example of the differential diagnosis of pulmonary fibrosis based on the roentgen findings alone, I am reproducing the following tables from my paper entitled "The X-Ray Aspects of Pneumoconiosis," which appeared in *Radiology,* July, 1936:

Table 1.—*Lesions Simulating Silicosis in the Roentgenogram*

1. *Incipient Type*
    - Passive congestion of the lungs (cardiac).
    - Acute respiratory-tract infections.
    - Asthma.
2. *Interstitial Type*
    - Passive congestion of the lungs (cardiac).
    - Acute and chronic respiratory infections (especially bronchitis and bronchosinusitis).
    - Polycythemia.
    - Metastatic malignancies, infiltrative type.
    - Mycoses.
    - Lymphoblastoma (infiltrative Hodgkin's).
    - Pulmonary syphilis.
3. *Nodular Type*
    - Miliary tuberculosis.
    - Metastatic malignancies (miliary carcinosis).
    - Periarteritis nodosa.
4. *Advanced Type*
    - Chronic pulmonary tuberculosis.
    - Pulmonary tumors.
    - Pulmonary syphilis.

Table 2.—*X-Ray Findings in Silicosis (Uncomplicated or Simple Silicosis)*

1. *Incipient Type*
    - Hilar shadows wider and denser than normal; perihilar pulmonary tree markings wider than normal.
2. *Interstitial Type*
    - Hilar shadows wider and denser than normal; slight or moderate diffuse thickening of the pulmonary tree markings, associated with faint haze in middle or lower thirds of the lungs in early cases; extensive thickening in well-established cases.
    - Limitation of diaphragmatic excursion (varying from slight to marked).
3. *Nodular Type*
    - Hilar shadows wider and denser than normal; diffuse scattering of small, dense, discrete nodules throughout both lungs, especially in the middle thirds; apices usually free.
    - Limitation of diaphragmatic excursion.
4. *Advanced Type*
    - Hilar shadows less prominent than usual; diffuse thickening of the pulmonary tree markings, and/or diffuse nodulations; small or large areas of density due to coalescence of fibrotic or nodular lesions.
    - Emphysema.
    - Limitation of diaphragmatic excursion.
    - Occasional cavitation.
    - Enlargement of the right side of the heart.

For those who are interested in the subject, the minimum requirements for satisfactory roentgenograms of silicosis cases are described in the above-mentioned paper and, also, in Pancoast's article in the *Journal of Industrial Hygiene,* Vol. 16, p. 165, May, 1934.

No matter how detailed a fluoroscopic examination is or how perfect a given set of stereoscopic roentgenograms are, it is to be remembered that the interpretation is the only part of the roentgen examination which is of value. The sooner that more stress is laid upon competent interpretations, and less upon "an x-ray plate of the lungs," the sooner will accurate diagnosis of silicosis be established in surveys of dust workers.

* * *

Munford Smith, M. D. (727 West Seventh Street, Los Angeles.)—It is a pleasure to discuss a paper such as this one by Doctor Pierson, who is familiar not only with the literature on the subject, but has had a large experience in the application of his knowledge of silicosis to many concrete cases. There are, however, some points in his discussion with which issue must be taken, not because he is less familiar with the subject than I am, but because the correction of errors in even little relatively unimportant details may prevent further confusion.

The subject of his paper is "Silicosis." At the risk of being considered hypercritical, there must be objection to the inclusion, as sources of silicosis, of asbestos and talc, both of which are silicates of magnesium and in neither of which does silica exist in a free state except as a contaminant from the quartz which may have bound together the strata of the material in its natural state. Asbestos may produce a severe form of pneumoconiosis; and while talc theoretically causes a silicatosis, which is a form of pneumoconiosis, it is a relatively harmless material, and to my knowledge there is only one reference in the literature indicating that it is capable of producing anything more than a mild fibrosis, this one exception being a report of the United States Public Health Service of a survey of two mines in a county in Georgia with a very high tuberculosis morbidity rate, which is unrelated to the inhalation of talc.

Under the qualifications determining the harmfulness of a dust, Pierson gives as one of the factors the presence of concomitant gases and refers to the work of Banting, who has offered the hypothesis that gases present in the atmosphere of mines irritate the normal lining of the respiratory tract, with the result that silica is more readily absorbed. I believe this theory has not been accepted.

In discussing the legal requirements of the California Workmen's Compensation Laws, as applied to claims for silicosis, Doctor Pierson states that our laws at present are so worded that a workman may and must apply for compensation insurance within a period of six months from the time that he has symptoms referable to the disease. Doctor Pierson's statement is correct, I believe, as to the wording of the law, but in the application of it it is only necessary that the workman apply for compensation insurance within a period of six months from the time that he knows he is suffering from disease and, as a matter of fact, it seems that in the practical application of this part of the law, it is only necessary that he make such claim within six months of the time that he admits he knew of the presence of the disease.

Finally, Doctor Pierson refers to the importance of unscrupulous or misinformed lawyers or doctors in the situation which has arisen not only in California, but elsewhere. As a physician, I am incompetent to judge the ethics of the legal profession, but I believe I am capable of doing so with those of my own. In an experience of well over three hundred cases involving the question of possible harm from dust, it has never been my experience to contact an unscrupulous physician, unless a misrepresentation of his qualifications dependent on knowledge and experience in diseases of the lungs and silicosis could be so classified, but the amount of misinformation possessed by some of the members of both groups has been surprising.

If Virchow was really the father of pathology, he would surely have difficulty in recognizing some of his offspring, if we are to judge by the fantastic theories that have arisen to explain some of the claims of silicosis with which I have come in contact. The explanations sometimes presented in support of the claim of silicosis are so diametrically opposed as to make medicine and chiropractic seem blood brothers.

Some claims for compensation for silicosis, which disease is certified as being present by physicians, not only lack evidence of that disease, but silica dust may be entirely absent from the atmosphere of employment.

As members of a profession who see much of human suffering, probably the majority of us would, if it were possible, prefer some adjustment of the wealth which is so unevenly distributed, and when a claimant who attributes ill health to some factor in industry appears before us, it is easy to permit our sympathies to lead us astray. "Soaking the rich" has been one of the favorite pastimes of recent years. That, in my opinion, is the principal factor in many unwarranted claims. We may even be tempted, since the defendant is a rich corporation, to emulate Robin Hood and take from the rich for the poor. However, our opinion is sought as that of scientists and not as economists of the Huey Long school, and when we accept that position we should function in such a way as to justify the faith placed in us.

To me it seems that if we keep in mind that the claim which we are supporting is one covered by the provisions of the Workmen's Compensation Law, which provides for medical care and payment of compensation for illness or injury incurred in the course of employment, and is not life or health or unemployment or old-age insurance, we may many times avoid a position which can be exceedingly embarrassing.

Finally, it is possible for any physician who is not familiar with silicosis to obtain the essential data on its etiology and diagnosis. Our medical libraries will gladly provide such information.

TRAUMATIC RUPTURE OF THE UTERUS IN ADVANCED PREGNANCY*

By E. M. Lazard, M.D.
and
F. E. Kliman, M.D.
Los Angeles

Discussion *by Sterling N. Pierce, M.D., Los Angeles; J. Morris Slemons, M.D., Los Angeles; Leon J. Tiber, M.D., Los Angeles.*

In presenting the report of a case of rupture of a uterus, eight and one-half months pregnant, by external violence, we purpose to review the literature and consider the mechanics of this accident. We will not consider those cases of uterine rupture through cesarean or myomectomy scars; nor those ruptures occurring as a result of obstructed labor or in the course of operative attempts at delivery or abortion.

CLASSIFICATION

1. Complete, through the entire uterine wall, with complete or partial extrusion of the uterine contents into the abdominal cavity.

2. Incomplete, where the rupture is not through the entire uterine wall. As to location, the tear may be in the upper or in the lower uterine segment, usually the upper when due to external trauma.

ETIOLOGY

While a trauma of sufficient force may cause a rupture in a healthy uterus, yet the presence of a weakened point caused by preceding disease, such as hyalin degeneration of muscle fibers resulting from multiparity, previous curettages, placenta praevias, intramural fibroids, etc., would undoubtedly increase the probability of rupture resulting from external violence.

In a review of the literature, by Estor and Pueck (referred to by Jaroschka, *Medizinische Klinik,* 1929), up to and including 1929, forty cases were found. Jaroschka reported one case, occurring in the Prague clinic in a series of thirty thousand obstetric cases. Orthner (*Münchner Med. Wöchenschrift,* August, 1933), reported an additional case in which the patient had been struck across the abdomen by a breaking trace on a team of horses which she was driving. At operation, one and one-half hours after the accident, the patient was found to have a ruptured uterus, with complete extrusion of full-term twins and placentae into the abdominal cavity.

Orthner gives the following explanation of the mechanics of the injury: As to whether the blow or the resultant fall is the principal factor, he says that as a rule one can assume that whichever is of the greater intensity is the chief factor, *i. e.,* with a slight blow and a fall from a great height, the latter is the main factor; with a severe blow and a short fall to the floor, the blow in all probability is to blame. It is not possible, as a rule, to determine the kind and direction of the force from

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* Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

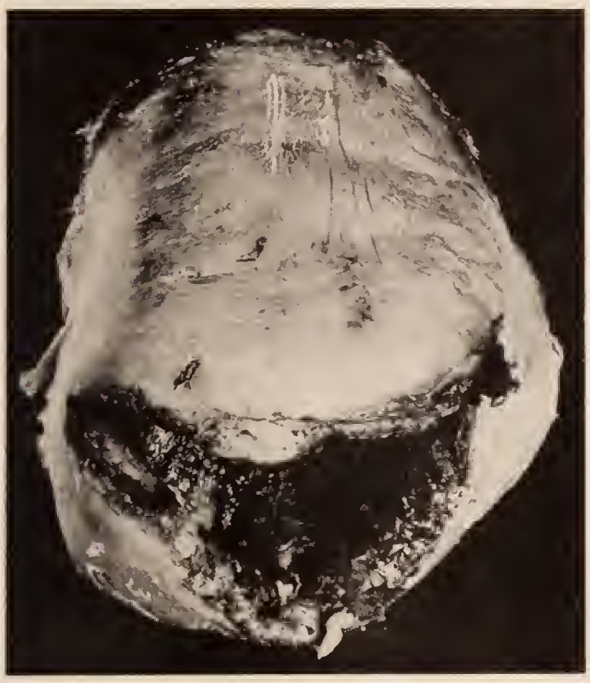

Fig. 1.—Ruptured uterus. Transverse rupture on the posterior surface of fundus.

the location of the uterine rupture, as this usually occurs by contrecoup.

The rupture is always the result of a sudden increase of the intra-uterine pressure, caused by the sudden compression of the abdominal contents.

In accordance with the laws of hydrodynamics, this pressure spreads equally in all directions in the uterine cavity filled with amniotic fluid. The tear occurs at the weakest point of the uterine wall. At the end of pregnancy that point is at the fundus, which, moreover, lacks the protection of the bony pelvis. In many cases it appears that the placental site is especially weak because of the increased vascularity.

The following case occurred in the service of the senior author at the Los Angeles General Hospital:

REPORT OF CASE

Hospital No. 394-515. Gravida 1. Para 0. Nineteen years of age. Admitted December 22, 1934, at 7 p. m. About eight months pregnant. One month and two weeks ago she was under observation for threatened premature labor. At 3:30 p. m. today (four hours before admission), she fell down steps, striking her abdomen on the edge of a step. Did not faint, but had great difficulty in breathing. Has had severe abdominal pain for over one hour. Has had shoulder pain for one hour. She cannot take a deep inspiration. Vaginal bleeding started one hour after fall, and a large gush of blood escaped from vagina. No fetal movements felt since fall. Has infrequent cramp-like pain in lower back and groin. Blood pressure, 128/84. No fetal heart tones heard. Abdomen distended. Fundus cannot be felt. Diastasis recti present. Fetal small parts anterior and seem to be just beneath the skin.

Vaginal Examination.—Cervix admits one finger, not effaced, no presenting part felt in pelvis.

Blood Count.—Hemoglobin, 70 per cent (Sahli); red blood cells, 3,730,00; white blood cells, 34,000; polymorphonuclears, 95 per cent.

Diagnosis.—Ruptured uterus, dead baby; 8:45 p. m., laparotomy, abdomen full of blood and contains fetus in intact amniotic sac and placenta. Uterus contracted down, and has a tear across the posterior surface of fundus (see specimen). Supravaginal hysterectomy done, followed by blood transfusion. Uneventful convalescence. The patient was discharged in good condition on January 2, 1935 (twelfth day).

*Pathologic Laboratory Report.**—Two microscopic sections were examined, one taken from the myometrium adjacent to the laceration in the uterine wall. This section shows typical structure of the muscle of a pregnant uterus. The surface involved in the laceration shows desiccated blood and muscle fibers from exposure, and some minor inflammatory changes in the immediately underlying uterine tissue.

The second section evidently was taken from a location removed from the region of the rupture and shows endometrial tissue with placental syncytial cells.

The structure of the muscle tissue in both sections is of interest; and while presenting the typical characteristics of pregnant uterine muscle, is apparently distinctly abnormal in two features:

1. Many of the muscle fibers show degenerative changes, the cytoplasm being swollen and granular, with loss of many nuclei.
2. A careful estimation of the size of the fibers indicates that they are distinctly smaller in cross-diameter than the normal uterine muscle at term, as determined by measurements made on normal specimens; the average measurements in this case being fifty fibers to the millimeter, while normal specimens averaged twenty-five to thirty fibers to the millimeter.

It is my opinion that this must have been in some degree a pathologic myometrium, but there is no evidence of any local defect at the region of the rupture which was not present throughout the uterus.

COMMENT

In our review of the literature, we find that Estor and Pueck (quoted by Jaroschka) collected forty cases of traumatic rupture of the pregnant uterus up to 1929; to these Orthner adds one case, and our present case makes forty-two in the literature.

One of the reported cases, included in Estor and Pueck's review, that of J. B. DeLee (*American Journal of Obstetrics and Gynecology,* December, 1904), was very similar to our case in the nature of the force, in that his patient also fell through a broken step, striking on her abdomen. It differs, however, in that his patient was a gravida 14 and had had six abortions in the fourth, fifth, sixth, and seventh months, respectively, and therefore probably had a weakened uterine musculature, while our patient was a gravida 1, with no antecedent history, which would indicate probable disease of the uterine musculature.

It also differs from both Orthner's case and our own in that DeLee's case was not seen until some fifty hours after the accident and was operated on sixty hours after the trauma; while Orthner's case was seen and operated on within three hours of the accident, and ours was operated on within five hours of the trauma. As a result the patient reported by DeLee had a very stormy convalescence, but eventually a complete recovery; while Orthner's patient and our patient, who were operated on a few hours after the accident, made smooth, uneventful convalescences, both being discharged from the hospital on the thirteenth postoperative day.

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* Microscopic report by Dr. N. Evans, hospital pathologist.

This emphasizes the extreme importance of early diagnosis and operative treatment in any case of uterine rupture if our morbidity and mortality (the latter, 100 per cent in cases of complete rupture, unoperated on) are to be kept down.

The question as to whether the laceration should be repaired or a hysterectomy done, depends entirely on the conditions in any given case. As a rule, it would appear to us that a patient in the general condition in which these patients usually are, would be better served by a rapid hysterectomy than by a longer procedure with careful suture of the wound, with the possibility of a postoperative uterine hemorrhage. Moreover, these uteri are usually weakened by antecedent disease, and with the additional weakness of a scar would be particularly susceptible to rupture in a succeeding pregnancy or labor (the latter if section were not done before onset of labor).

However, in a gravida 1, who is desirous of having a child, it would be justifiable if her condition would permit. There have been some cases reported in which repair has been done and the patients successfully carried through a succeeding pregnancy.

In the majority of cases, especially in multiparae, with diseased uteri, we believe hysterectomy, as early as possible, is the procedure of choice.

RECENT CASES IN THE LITERATURE

After this article was written two additional cases appeared in the literature. The first, a report of "Traumatic Rupture of an Early Pregnant Uterus" by G. S. Ruder and C. G. Moore, appeared in the *American Journal of Obstetrics and Gynecology* for March, 1935:

> Their patient, when first seen, was treated for threatened abortion. Eighteen hours later she presented symptoms of uterine rupture, and at operation a complete longitudinal rupture of the uterus, with extrusion of the fetus and placenta into the abdominal cavity, were found. The authors assume that the rupture occurred as a result of an indirect violence, as the patient had been riding on a merry-go-round the day before and they believe that she received a blow upon her side, although she was not aware of it.

Their report does not give any histologic findings such as might indicate preceding disease of the myometrium. . . . Would it not seem more plausible that the ride caused the onset of the abortion and that a weakened diseased uterine musculature gave way, rather than that a longitudinal rupture was caused by a blow which was not sufficient to cause the patient to notice it? Moreover, there were definite signs of a threatened abortion, and the signs of rupture did not occur until some eighteen hours after the onset of labor pains.

The second report, "Spontaneous Rupture of Uterus at Sixth Month of Pregnancy" by F. A. Smilow, appeared in the *American Journal of Obstetrics and Gynecology* for May, 1935:

> Gravida 2. Three hours prior to visit, the patient tripped while ascending stairs. The fall did not hurt her; one hour later she had severe lower abdominal cramps and a slight amount of vaginal bleeding. Vomiting occurred once; eight hours after her visit, a profuse vaginal hemorrhage occurred which left her faint. Two hours later she presented evidence of shock with cold clammy skin. Pulse, 140; blood pressure, 90/60; hemoglobin, 40 per cent; red blood cells, 2,620,000; white blood cells, 16,400; entire abdomen rigid; no definite masses outlined.
>
> At operation, large amount of blood in abdominal cavity, fetus of five months' development in abdomen. Clean, longitudinal rent in midline of the posterior surface of the uterus, extending from the fundus to level of internal os. Placenta densely adherent to anterior wall of uterus. Subtotal hysterectomy done. The patient was discharged from the hospital in two weeks. With the previous pregnancy, she had a toxemia, no convulsions; severe endometritis for several weeks after delivery.

IN CONCLUSION

It is of interest to note that of four cases of rupture of the uterus, the original reports of which we have had access to, three of them, namely, one by J. B. DeLee, one by E. A. Smilow, and our case, the trauma consisted of a fall down the steps.

1930 Wilshire Boulevard.

DISCUSSION

Sterling N. Pierce, M. D. (1930 Wilshire Boulevard, Los Angeles).—At first glance, it is striking that most of the patients reported have survived. However, a reason for the survival is to be found in the fact that the blood vessels constrict, and thus the bleeding rapidly diminishes, or even stops entirely.

The uterine contents (the placenta, the amniotic sac, etc.), are immediately emptied into the abdominal cavity, whereupon the uterus contracts as it would following a section. Since, as is well known, the blood supply at the midline (where the rupture usually occurs) is scanty, these contractions of the uterine muscle practically stop the bleeding.

This consideration would make me believe that in cases where the placenta is inserted more toward the parametrial region, where the contractibility is less and the blood vessels are much larger, the trauma would result in fatal exsanguination.

Concerning the etiology, I would suggest that the weakness at the placental site is to be explained by the fact that the placenta, with its excrescences, digs deep holes into the uterine muscle, so that the muscle is thinned and divided and, with the increased vascularity, is in a condition to tear under impact.

As to therapeutic procedure, I should like to add this comment: much depends on the location of the rupture. If it occurs in the fundus, a repair of the laceration is quick, and is done with less shock. If the tear is located in the lower segment, transverse hysterectomy is indicated.

Palliative measures must be considered and might be life-saving; such as the application of the Momberg belt, or clamping the uterine arteries through the cervix until the patient can be relieved of shock and prepared for surgery.

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J. Morris Slemons, M. D. (523 West Sixth Street, Los Angeles).—Aside from the fact that Doctors Lazard and Kliman have added a case of exceptional interest to obstetrical literature, they have raised questions of considerable scientific importance. It is difficult, for example, to accept the correctness of the hypothesis they adopt. The amniotic fluid, it seems to me, is less likely to promote such an accident than to protect pregnancy against it.

Certainly, the "solid" abdominal viscera, upon occasion, have been ruptured by blows. Accredited instances are at hand of traumatic rupture of the kidney, the liver, and the spleen. The bladder, to be sure, is more likely to be ruptured when full; but is this not partly due to its more exposed position?

A blow upon the abdomen has caused intussusception of the small intestine; and this phenomenon, we are told, may be invoked in the laboratory at will by pinching the bowel of the rabbit with an hemostatic clamp. That experiment, at least, suggests another mechanism as responsible for traumatic uterine rupture. In this particular instance there is evidence of an unusually irritable uterus: the patient was treated previously for threatened premature labor. May not the blow upon the abdomen have excited violent contractions which, in turn, tore open the weak area in the uterine wall? Spastic peristaltic waves have ripped apart an intestinal anastomosis before healing became firm.

This comment merely represents another point of view. At present the true explanation remains beyond us. Perhaps we would approach that objective more nearly if the authors were willing to review cases of rupture of various abdominal organs, attributable to trauma. Such study, almost surely, would repay the time and energy involved.

The treatment responsible for this woman's recovery was that which should always be employed in the circumstances, whether the complication be seen early or late. Otherwise the issue will be fatal.

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Leon J. Tiber, M. D. (3875 Wilshire Boulevard, Los Angeles).—It is surprising that more cases of traumatic rupture of the uterus in advanced pregnancy are not reported, especially considering the tremendous number of automobile accidents.

Is it not possible that in the case of a visible fall, as on some steps, the attempt to break the fall so contorts the uterus that there is a compression area where the uterus is flexed, and, on return to normal, this portion of the uterus presents itself as a weak spot? The authors have pointed out the intra-uterine pressure spreads equally in all directions; therefore, if a rupture is to occur, it should happen at this point of weakness.

It is interesting to note that, in the reported case, there was a demonstrable pathologic variation of the uterine muscular fibers. In the other cases cited it is assumed, from the case histories of previous infections and abortions, that the rupture of the uteri occurred at a pathologic point.

My own experience in the treatment of ruptured pregnant uteri has been with three cases of previous classical cesarean section complicated by hard and neglected labors, none due to accidents. In properly selected cases, one may attempt to repair the tear. However, a subtotal hysterectomy assures a more rapid and safe convalescence. One must always remember that a uterus that ruptured once during pregnancy is certainly more liable to rupture in succeeding pregnancies, other conditions remaining the same. An early diagnosis with active treatment is necessary.

Has there ever been any x-ray diagnosis in these cases—a fluid level of the blood in the peritoneal cavity, an extruded fetus or otherwise irregularity of uterus? These might help to clear up a doubtful diagnosis.

RHINOPHYMA[*]

By Winston C. Crabtree, M.D.
San Diego

Discussion *by Philip K. Allen, M. D., San Diego; F. G. Novy, Jr., M. D., Oakland; K. C. Brandenburg, M. D., Long Beach.*

RHINOPHYMA is a condition perhaps best described by the single term "monstrous hypertrophy of the end of the nose." A fairly accurate clinical picture of the condition is presented by merely listing the descriptive terms often used in naming the disease: whisky nose, nodular nose, copper nose, elephantiasis of the nose, growing nose, acne hyperplastica, fibroma molluscum and cystadenofibroma of the nose.

RHINOPHYMA A DISEASE OF THE SKIN

Rhinophyma being primarily a disease of the skin, probably concerns the dermatologist more directly than the rhinologist. However, inasmuch as the only adequate treatment is surgical, it behooves the rhinologist to familiarize himself with all the phases of this disease in order to be able properly to perform the prescribed surgical measures.

It is at once apparent that the disfigurement and humiliation caused by rhinophyma is of the utmost concern to the person afflicted. In one instance, a case of a woman, the condition caused such extreme personal embarrassment as to result in threatened suicide. Many of the sufferers are led to believe there is no cure for this ugly affliction. That is most unfortunate, because the administration of proper treatment with satisfactory results is rather simple.

With but few exceptions, rhinophyma occurs in the middle or later years of life, by far the greater percentage coming between the ages of fifty and seventy years. It is far more common in the male than in the female, the ratio being approximately twelve to one.

To offer a lengthy discussion as to the etiology of rhinophyma does not fall within the scope of a rhinologist. The condition frequently is considered attributable to chronic alcoholism—at least in the minds of the laity. This common theory is entirely untrue and without foundation. It is perhaps more logical to attribute the chronic alcoholism to rhinophyma than the reverse when the two conditions coexist in the same individual. One author[1] suggests that in many instances there is apparently a congenital predisposition to rhinophyma in the so-called wide-pored individuals. Another states that the nose is the most constantly exposed portion of the entire body, this fact possibly lending to the development and gradual progression of the condition. However, it is generally agreed that the type of tissue present is the etiologic factor of primary importance. That rhinophyma is frequently a sequel or terminal stage of acne rosacea, is an accepted fact borne out by the similarity of the pathologic pictures of the two diseases.

ACNE ROSACEA

Acne rosacea is a subacute or chronic congestive disease of the nose and flush areas of the face. It begins as a passive hyperemia, which is followed later by dilatation and proliferation of the superficial capillaries. Pustules are present. Accompanying the blood-vessel changes is an hypertrophy of varying degree of the cutaneous and subcutaneous tissues. In some instances the hypertrophy may attain a sufficient degree to produce more or less lobulated masses, thus deforming the normal structure of the nose. Also, the pores become patulous and either sebum or pus, or both, may be expressed from them. This stage is known as rhinophyma. Please bear in mind that this process of development is very slow, the progression covering a period of several years, varying from five to twenty.

Histologically, early acne rosacea presents a dilatation of the capillaries with newly formed blood vessels, the increased blood supply resulting in edema and overnourishment of the connective tissues. As the disease advances, deeper vessels

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[*] Read before the Eye, Ear, Nose, and Throat Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

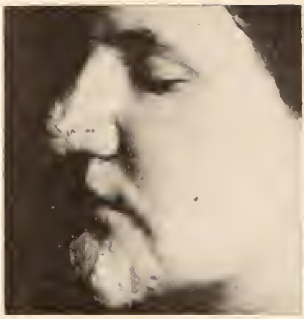

Fig. 1

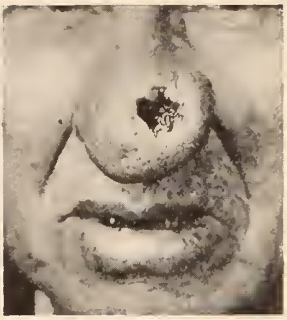

Fig. 2

Fig. 1.—An unusual case of rhinophyma with similar pathological changes affecting chin—gnathophyma. (Courtesy of Dr. Wiley M. V. Sams.)

Fig. 2.—Rhinophyma which has undergone carcinomatous degeneration. (Courtesy of Dr. F. G. Novy, Jr.)

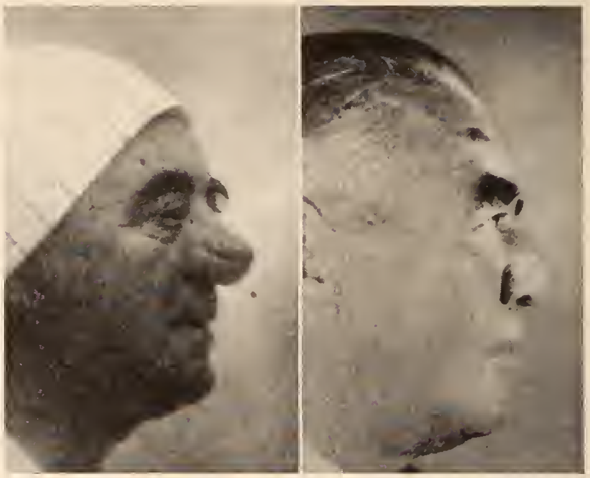

Fig. 3 Fig. 4

Figs. 3 and 4.—One of author's cases of rhinophyma showing "before and after" surgery stages.

are involved, which may become surrounded in areas by thick mantles of infiltrate made up of lymphocytes, epithelioid cells, and occasional giant cells. The condition being chronic, and one which is prone to recurrences, leads, therefore, to considerable hypertrophy of the connective tissue and sebaceous glands, which together comprise the first signs of the later stage, known as rhinophyma. Rhinophyma, histologically, consists of a marked hyperplasia of sebaceous glands and connective tissue, plus many of the cellular elements found in acne rosacea.

SURGICAL TECHNIQUE

The surgical removal of the large nodular masses is a simple procedure. Correct technique in administering the proper local anesthetic, using two per cent novocain, is accurately described by Labot,[2] the block infiltration being made chiefly along the borders of the nasal pyramid. Using a knife or razor, as preferred, the hypertrophic masses of tissue are readily pared off with exact precision, extreme care being taken to obtain proper reshaping of the nose. Gordon New [3] suggests placing the index finger of the left hand in each nostril as the paring is performed, thus permitting greater accuracy. Rather profuse bleeding is readily controlled by pressure, plus the use of hemostatic solutions, if such are desired.

Considerable emphasis should be placed on the importance of not shaving too deeply, and for two reasons: first, to avoid injury to the nasal cartilages, and, second, to preserve a thin layer of subcutaneous tissue and many islets of epithelial tissue, which are necessary for proper epithelization. These small islets of epithelial tissue are from the sebaceous gland rests, and are plainly visible as the surgery is performed if time is taken to slow the bleeding. It is also important to preserve a thin rim of epithelium around the nares in order to prevent disfigurement from resultant contractions incident to cicatrization. Vaselin gauze, hot compresses or xeroform gauze dressings are to be used with tinfoil or a thin cast of dental wax, necessary for holding the dressings in snug position over the nose.

Healing with proper epithelization will generally occur with rather amazing rapidity. Dressings may be omitted after seven to ten days as a rule. The use of tincture of benzoin, 25 per cent silver nitrate, trichloracetic acid, and scarlet-red ointment, are all commendable for use postoperatively in dealing with granulation and scar tissues. One dermatologist [4] recommends x-ray and sometimes carbon dioxid snow for postoperative treatment if granulations or scarring are in excess.

OTHER PROCEDURES

Treatment of rhinophyma by galvanocautery or electrocoagulation should be rejected as unreliable and dangerous, because of possible damage to underlying bone, cartilage, and nasal mucous membranes.[5] The extent of the necrosis which may follow use of the cautery cannot be accurately gauged at the time of operation. Also there may result an extensive destruction to the epithelial tissue, which must be preserved to obtain a proper and prompt healing. Electrocoagulation has been suggested by some men as useful during [6] the operation for hemostasis.

The literature of several years ago will reveal frequent descriptions of the use of skin flaps from the forehead, or grafts from the arm, as necessary in procuring the proper cosmetic end-result in the treatment of rhinophyma. Such measures have been almost entirely discarded. The use of the graft is now confined only to cases of rhinophyma with carcinomatous degeneration, or in instances where x-ray, radium, or cautery have been employed inadvertently, with a resultant destruction of too much of the nasal tissues.

X-ray therapy is commonly employed by the dermatologist in treating acne rosacea. Thus it follows that the use of x-ray in treating rhinophyma may be of value particularly in diminishing the folliculitis, which may often be severe. Such a procedure is frequently very useful as a preoperative measure in better preparing the case for surgery, whereby sometimes 30 to 40 per cent involution of the tumor mass may be obtained.[7] In mildly developed rhinophyma, the use of x-ray therapy in clearing the folliculitis may allay or even entirely remove the necessity for surgical treatment. Radium, likewise, has its place in similar therapy. This phase of the treatment of rhinophyma is, of course, to be placed in the hands of the dermatologist. Thus, stress should be placed on the complete coöperation between dermatologist and rhinologist in procuring the best results.

IN CONCLUSION

In concluding, the following points demand emphasis:

1. The actual causative etiology of rhinophyma is somewhat obscure, though the condition is recognized as a benign sequel of acne rosacea.
2. Adequate surgical treatment of rhinophyma is a relatively simple procedure.
3. The use of skin grafts, cautery, and electrocoagulation have been, in the main, discarded.
4. X-ray is very valuable in both pre- and postoperative treatment, and in some instances may be sufficient treatment, to the point of excluding surgery.
5. Full coöperation between dermatologist and rhinologist is essential in all cases of rhinophyma.

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REFERENCES

1. Seelig, M. G.: Surgical Clinics of North America, 5:1385.
2. Labot, Gaston: Regional Anesthesia. W. B. Saunders Company, 1930.
3. New, Gordon: Surgical Clinics of North America, 1:1395.
4. Allen, Philip K.: Personal communication.
5. Maliniak, Jacques W.: Arch. Otolaryn., 31:273.
6. Marin, Alberic: Canad. M. A. J., 25:589.
7. Sams, Wiley M.: Arch. Dermat. and Syph., 26:836.

DISCUSSION

Philip K. Allen, M. D. (314 Medico-Dental Building, San Diego).—I am most interested in this paper from a standpoint of therapy, particularly the cosmetic end-result. Inasmuch as rhinophyma does not endanger life nor impair health, the appearance is of prime importance. The condition is by no means a new one. It was known to Hippocrates and was described by the early Arabians. In more than two thousand years innumerable types of treatment have been advocated, most of them without real therapeutic value.

The nonsurgical treatment of rhinophyma has proved unsatisfactory. Local applications which are not caustic nor destructive may impede the progress of the disease, but do not reduce the hypertrophy. X-ray and radium therapy have, on the whole, proved disappointing, although occasionally pleasing results have been reported. McKee states in his book, "X-Ray and Radium in the Treatment of Diseases of the Skin": "X-ray (and radium) seem to be of very little real service in rhinophyma." Acne-like lesions do disappear under x-ray treatment, and the sebaceous glands will become smaller and less active. In a markedly enlarged nose, however, the limited shrinkage that can be effected by x-ray does not give satisfactory end-result. Its usefulness is limited, therefore, to the early case in preventing further hypertrophy. Where considerable enlargement has taken place other forms of treatment, mainly surgical, are indicated.

Various types of surgical measures have been used. Acids, caustics, cautery, and scarification have all had advocates. It seems odd that the simple and most obvious procedure of carving the nose down to the desired size and shape should be left to comparatively recent times.

The good results in such a simple sculptural operation are due to the anatomy of the condition. Removal of hypertrophic tissue leaves sufficient basal epidermal cells to insure rapid and complete epithelialization.

I agree with the essayist that the best cosmetic results are to be obtained by surgical excision of the hypertrophic tissue; but I would suggest, as an aid to prevent subsequent regrowth, the use of the x-ray as soon as epithelial regeneration has taken place.

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F. G. Novy, Jr., M. D. (411 Thirtieth Street, Oakland). Doctor Crabtree should be commended on emphasizing the simplicity of the surgical treatment of rhinophyma. The use of skin grafts and complicated surgical procedures are unnecessary, as epithelialization takes place rapidly from the remains of the sebaceous glands.

I do not agree with the author regarding the use of electrodesiccation. If this modality is used with a low current and care, good results may be obtained. Klauder (Arch. Dermat and Syph., 33:885, May, 1936), recently reported a satisfactory technique. He inserts the electrodesiccating needle (unipolar method) into the mass, and a low current is then turned on until a small area is blanched. This is then curetted until bleeding occurs, when another area is treated or the same area is again treated if further destruction is desirable. The advantages of this method are that the operation is nearly bloodless and the cosmetic result compares favorably with surgical excision.

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K. C. Brandenburg, M. D. (110 Pine Avenue, Long Beach).—We are indebted to Doctor Crabtree for presenting us with a simple but effective remedy for a most disfiguring condition which, though it does not endanger life, may render existence extremely unpleasant to the individual suffering from this hideous deformity of the nose.

It is surprising that the ingenious expedient of shaving off the redundancy has not been resorted to before; but, as with so many other simple procedures, we must be shown by someone with Doctor Crabtree's courage and good sense.

The importance of rehabilitating these individuals is much greater than anyone who has not suffered from such a disfiguring condition can realize. As is also the case with crossed eyes, these unfortunate individuals are frequently highly sensitive about the matter and find it a marked social disability.

The knowledge that an effective treatment is available will be most welcome to wearers of "whisky noses."

SCABICIDAL DRUGS: AN EXPERIMENTAL STUDY*

By H. J. Templeton, M.D.
and
H. V. Allington, M.D.
Oakland

Discussion *by George V. Kulchar, M. D., San Francisco; Hiram E. Miller, H. D., San Francisco; Samuel Ayres, Jr., M. D., Los Angeles.*

Scabies is a disease whose treatment we generally approach quite confidently, feeling that we have in sulphur a near-specific which, in the great majority of cases, is rapidly curative. However, we have all had the experience of treating patients whose scabies was cured only with great difficulty, even though not complicated by irritation from the sulphur and though the balance of the family were properly treated and the clothing adequately sterilized. Such experiences have modified, to a certain extent, our former cocksure attitude in regard to the ease of curability of this disease.

KINGSTON'S STUDIES

This attitude was intensified, and the present experimental work stimulated by an interesting

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* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

TABLE 1.—*Survival Times of Acarus Scabeii in Various Remedies*

Tap water	8 days+
Vaselin, white	50 hours
Sulphur precipitate, 8 per cent in vaselin	40 hours
Sulphur, colloidal, 10 per cent in vaselin [1]	15 hours
Sulphur, colloidal, 5 per cent aqueous solution [2]	5 hours
Scabicide [3]	1 hour, 5 min.
Mitigal [4]	50 min.
Balsam Peru, 8 per cent in vaselin	30 min.
Styrax [5]	30 min.
Creolin, 1 per cent in vaselin	1 hour, 10 min.
Betanaphthol, 2 per cent in vaselin	1 hour, 5 min.
Pyrethrum Ointment [6]	21 hours

[1] H. K. Mulford Company, San Francisco.

[2] Associated Physicians' Laboratory, San Francisco.

[3] Upjohn Company.

[4] Winthrop Chemical Company.

[5] ℞ Styracis Liquidi 14.
Ol. Olivae.
Spts. Vini Recti āā 20.
M. Sig:

[6] Upsher Smith.

article by Kingston[1] entitled "An Outbreak of Scabies in a Mental Hospital." Using an apparently adequate and careful technique of treating scabies by means of Sulphur Ointment B. P., he came to certain discouraging conclusions, which I will quote:

> Out of ten certain cases of scabies in mental patients, not one was cured by two courses of sulphur ointment treatment. A total of thirty-three courses of treatment resulted in five cures and five failures.

Kingston then performed some interesting experiments testing the scabicidal powers of various antiscabetic remedies. He dug out of patients burrows, active living female acari, and imbedded them in different remedies. These acari were then observed under the microscope until all movements of extremities and viscera had ceased, which point was taken to indicate death. His results are given in Chart 1.

AUTHORS' STUDIES

Inasmuch as Kingston did not study many of the scabicidal remedies in use in this country, we have performed similar experiments with different preparations.

Our method of procedure consisted of removing acari from the burrows of untreated patients, and imbedding four to eight lively specimens under a cover glass in each remedy to be studied. These were observed microscopically until all movements ceased. The survival times are indicated in Table 1.

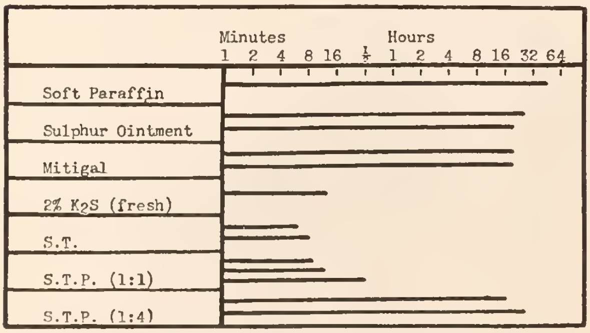

Chart 1.—(After Kingston.) Survival times of sarcoptes in various media (logarithmic scale). S. T. 1 per cent solution of sulphur in oil of turpentine B. P. S. T. P. (1:1) equal parts of S. T. and liquid paraffin B. P. S. T. P. (1:4) one part of S. T. to four parts of liquid paraffin B. P.

We are perfectly aware that the scabicidal property of any drug *in vitro* does not necessarily parallel its clinical value. The discrepancy between the proved clinical worth of sulphur and its slow killing time in our experiments might be explained by the theory that it is changed to the nascent state by the acids of the skin when it is applied to a patient. This could not hold true, however, of all of the other drugs studied. Therefore, it is our belief that the method of determining the scabicidal power of drugs *in vitro* is of practical value, and merits further attention in the search for more effective remedies.

3115 Webster Street.

REFERENCE

1. Kingston, Frank E.: An Outbreak of Scabies in a Mental Hospital, The Lancet, No. 15, Vol. 11, p. 815 (Oct. 12), 1935.

DISCUSSION

GEORGE V. KULCHAR, M. D. (450 Sutter Street, San Francisco).—The evaluation of scabeticidal preparations by clinical methods is not entirely satisfactory, and for several reasons. Patients frequently do not carry out the routine properly, particularly in regard to sterilizing their wearing apparel, bed linen, and so forth, and reinfections are seen commonly. The thoroughness with which the patient applies the preparation and the thickness of the epidermis seem to be factors in the therapeutic efficiency of the commonly used scabeticides. To a certain extent one can prove the efficiency of a scabeticidal preparation by recovering the acari from lesions and determining, by microscopic examination, whether they are dead. At the same time, however, if one searches diligently in a patient who gives the clinical impression of being cured, an occasional live acarus can be recovered. The method proposed by Doctor Templeton certainly provides a more accurate means of evaluating scabeticidal preparations.

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HIRAM E. MILLER, M. D. (384 Post Street, San Francisco).—The authors' experiments with various antiscabetic remedies are most interesting. Their experimental results, however, do not coincide with clinical experience. It is well known, as they state, that sulphur is chemically changed when it comes in contact with the skin, and its efficacy in destroying the acarus of scabies is probably greatly enhanced by this change. Ringworm fungus will thrive on a culture media containing three per cent sulphur, but tinea circinata can generally be easily cured with a three per cent sulphur ointment. These experimental results would erroneously infer that one per cent creolin is much superior to sulphur in the treatment of scabies. I should have thought that petrolatum would mechanically destroy the acarus in a very short period of time.

This work is most instructive and worth while, and I am certain that the authors are fully cognizant of all the points that I have mentioned.

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SAMUEL AYRES, JR., M. D. (2007 Wilshire Boulevard, Los Angeles).—As Doctors Templeton and Allington have stated, the problem of treating scabies is by no means a closed chapter, and they have offered us a rational method for improving our therapy of this common and occasionally obstinate disease. We have never depended upon sulphur ointment alone, but have employed the formula long in use at the Massachusetts General Hospital:

Betanaphthol	2
Sublimed sulphur	4
Balsam Peru	15
Petrolatum	15

It is interesting to note, from the table presented, that both betanaphthol and balsam Peru in concentrations much less than employed in this formula are among the most active scabicidal drugs tested. In this case the experimental findings confirm our clinical experience of the remarkable efficacy of this particular combination of substances. By further experimentation along the lines suggested by the authors of this paper, however, it is entirely reasonable to assume that a more efficacious and less irritating remedy will be found.

URINARY TRACT INFECTION WITH "CLEAR URINE" *

By James R. Dillon, M.D.
San Francisco

Discussion *by Robert V. Day, M.D., Los Angeles; F. S. Dillingham, M.D., Los Angeles; Charles P. Mathé, M.D., San Francisco.*

It is surprising how many times medical men fail to recognize urinary tract infection in fairly typical clinical pictures because there is no pus in the urine, which may be macroscopically clear. This occurs particularly in both the acute and chronic coccal kidney infections, where the microscopic examination of the urine may show only a few red cells, few or no pus cells, and by the ordinary routine bacteriologic examination, few or no cocci. The urine in acute bacillary infections is practically always cloudy macroscopically, but microscopically may show only a few or no pus cells; the cloudiness being due to bacilli only, which is often considered a contamination, and the patient is treated as a "flu" condition, or possibly extensive examinations are carried out to differentiate typhoid, malaria, and other infective conditions, with a neglect of the urinary tract. Chronic bacillary infections also frequently occur with macroscopically clear urines which reveal no pus microscopically, and few or no bacilli are reported by the bacteriologist. This report is presented for the consideration of the diagnosis and etiology of various clinical pictures rather than treatment, it being evident from the histories of patients of repeated urologic examinations that diagnosis in this type of case is frequently missed by the urologists as well as internists. Nor does it include the cortical renal lesions or the so-called carbuncle of the kidney; nor the perirenal abscess types.

About fourteen years ago my attention was first attracted to the possibility that sometimes bacteria appear in the urine in "showers" during the acute stage, which may last only a few hours, and with three or four voidings the urine may be entirely clear of pus and with relatively few or no bacteria present.

REPORT OF CASE

Case 1.—A medical woman, actively practicing with her husband, also a medical graduate, complained of a pain in her right side, ran a low-grade temperature, rarely reaching 100 degrees, except during the acute attacks. The pain and tenderness seemed to be definitely in her right kidney, but cystoscopic examination and pyelograms by three different urologists, over a period of one year, showed normal pyelograms and negative urine reports from the bacteriological laboratories. One of the urologists passed four catheters up the right ureter, three of them stopping just below the pelvic brim at the site of an apparent ureteral stone shown in the x-ray, but at surgery this proved to be a phlebolith, and she continued to have her attacks. She resided about one hundred miles from San Francisco, and would have an attack (at intervals from two to six weeks) of rise in temperature, increased pain and tenderness, burning and frequency of urination. Samples of the urine during this onset would be loaded with pus and colon bacilli. She would start by automobile with the onset of the attack, and by the time she reached my office, in about three and one-half hours, voiding three or four times on the way, a catheterized specimen would be crystal-clear and the bacteriological laboratory report would be negative. On the eighth trip pus and colon bacilli were found in a catheterized specimen, and an immediate cystoscopic examination and collection of segregated urines showed the left kidney sterile and the infection entirely in the right kidney. Her tonsils had been removed and all possible foci checked by myself, as well as the two preceding urologists. Doctor Rigdon had been in consultation several times, and we finally decided it was a blind abscess in the renal cortex, which at times discharged into the renal pelvis. At operation we thoroughly exposed the kidney, pelvis, upper end of the ureter pedicle, and finally did a nephrotomy, exposing the pelvis from pole to pole. Cultures taken of the urine in the pelvis, on opening it, and sections of renal parenchyma were negative for signs of infection or pathology. She made an uneventful recovery, but I carried a guilty conscience until I met her several years afterward and she thanked me again, stating she had never had another attack after the operation.

OTHER TYPES

Cases of urethritis in males with coccal infections, showing a very slight purulent or mucopurulent discharge, or merely a glueing of the meatus in the morning, are sometimes treated over an indefinite period as a chronic gonorrhea or gleet. The two- or three-glass test may show all crystal-clear, with the first glass containing a few shreds, or possibly presenting a faint haze. The bacteriologic report of the second or third glass, as ordinarily done, will generally be negative, few or no pus cells, few or no red cells, or a few described bacteria, either coccal or bacilli, and if there is a scanty growth on the cultures, the opinion will be expressed "probably contamination," and the patient goes on being treated as an urethritis. I have had bacteriologists make the statement to me, when their cultures are slightly positive, that they were probably contaminations because the smears of the sediment did not show any pus. Men will also frequently appear complaining of frequency of urination, with slight bladder-neck sensitiveness or consciousness, revealing a macroscopically clear urine with a negative pus and bacteriologic report, and if the patient has no chronic prostatitis, he is lucky if he does not have one immediately made by repeated massaging. Or, if he is fortunate in having his prostate acquitted at the first trial, he may be retried and condemned as a neurotic. These bladder-neck irritabilities occur in both men and women, who suffer for indefinite periods because a diagnosis and cause is not ascertained. There are other clinical pictures appearing as a septic condition, with no symptoms referable to the urinary tract, and presenting macroscopically clear urine.

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* Read before the Urology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

BACTERIOLOGIC LABORATORY: ITS PLACE

In recent years I have come to depend less on the professional bacteriologic laboratories for my urine examinations, especially in the case of the ambulatory patient who comes to my office. Practically all of such reports are based on the smears and cultures made from the sediment of one centrifuge tube of urine. If the infective products are sufficiently diluted in the urine that it is macroscopically clear, those products will be very likely missed in the study of the centrifuged sediment of one tube of urine. I have trained my office nurse to concentrate the sediment of the entire collection of catheterized urine in the female and the third glass of voided urine in the male until she can plainly see a film of sediment in the bottom of the centrifuge tube. This is done by filling the centrifuge tube, vigorously centrifuging it and pouring off the supernatant urine and refilling it. This is repeated until the sediment of the entire specimen, amounting to six or eight ounces, as a rule, is concentrated in one tube. The supernatant urine from the last filling is poured off quickly, holding the tube in an inverted position until the smear is made from the scrapings from the bottom of the tube. The smears are fixed and stained with 1 per cent methylene blue, and for most cases we are only interested at this time in whether infection is present and whether it is coccal or bacillary. If present, it is then incumbent upon us to not only make a further urologic study by intravenous urography, cystoscopy, and possibly retrograde pyelograms, but also to determine the etiologic factor and its removal. Women frequently will be apparently cured of an urinary-tract infection, and the urine may be reported free of pus and bacteria, but they may continue to complain of bladder irritability, frequency, and urgency. Cystoscopic examination will reveal a normal-appearing bladder, but the distal side of the vesical orifice will show an inflammatory condition of the urethral mucosa, or, if of long standing, may show a fringe of polypi.

RÔLE OF ALVEOLAR INFECTIONS

My personal opinion is that infection and absorption of the alveolar process is the source of most of our upper urinary tract infections. I try to avoid the term "infected teeth," which is a dental problem, but an infected alveolar process, signifying really an osteomyelitis, is a medical and surgical problem, and we must seek those dentists who recognize this fact to coöperate with us in the proper surgical treatment. We must train ourselves in the study of x-ray dentures, insist on inspecting them ourselves, and follow up with further x-ray studies in three to six months' intervals to see that pathologic conditions in the alveolar process have really cleared up, before we are qualified to challenge the statements of those who are experienced in this study and believe such foci to be causative factors. Our search for foci should not end here, but all possible primary areas of infection, such as tonsils, sinuses, middle ear, skin, bowel, rectal and genital, etc., should be eliminated. Also, there is evidence that the primary infection of the kidneys may be very transient, clearing up spontaneously where the ureteral drainage is adequate; but it may then continue indefinitely as a trigonitis and urethritis, and serve as a focus for blood-stream or lymph-stream dissemination, or direct ascent by the ureter, and so produce recurring attacks of pyelonephritis after the primary focus has been removed.

The following are a few case histories illustrating the various clinical pictures of "clear urine" with urinary tract infection:

REPORT OF CASES

Case 2.—A husky Danish ambulatory longshoreman complained of frequency of urination with occasional urgency. Examination negative, except for the concentrated sediment of a "clear urine" showing a streptococcus, later confirmed by the bacteriologist as Streptococcus viridans. He would be temporarily relieved by bladder irrigations and urinary antiseptics, and was finally completely cleared up after several recurrences by getting a marked pyorrhea properly treated.

* * *

Case 3.—A ten-year-old school boy (one of four in the last year) complained of urgency, frequency, and feeling tired. Urine was clear, but showed trace of albumen, occasional casts and red cells, and the concentrated sediment showed a streptococcus, also confirmed by the bacteriologist. Cystoscopic examination and pyelograms were negative. He was put on urinary antiseptics, and a week later complained of a "gum boil." With the removal of a deciduous tooth, his urinary tract spontaneously cleared of albumen, blood, and streptococci.

* * *

Case 4.—A fifteen-year-old girl (the daughter of a medical man), strong, athletic, ambitious, but all her life had been subject to attacks of chills, fever, and prostration, every two or three months. She had been examined by internists, until one discovered she had a "floating right kidney" and suggested a cystoscopic examination, which disclosed a catheterized urine free of pus, but hazy with colon bacilli coming from the dilated functionless left half of a "horseshoe kidney." She was cured by nephrectomy.

* * *

Case 5.—A Jewish woman, age sixty-five, complained of frequency and urgency; also had a great liking for "sprees" on barbital drugs. She had been pronounced cured of a urinary-tract infection, but continued to suffer bladder symptoms for many months and was treated more as a mental case. Examination of the concentrated sediment of a catheterized specimen of "clear urine" showed a trace of pus and a fair smear of colon bacilli. Cystoscopic examination showed normal kidneys, but a fringe of polypi on the urethral edge of the bladder neck. Removal of all her remaining teeth, about ten, around which there was marked pyorrhea, fulguration of the polypi, followed by a few urethral dilatations and bladder irrigations with urinary antiseptics, cleared up the urinary tract entirely.

* * *

Case 6.—A young Italian, age twenty-one, presented an acute septic condition, temperature 104 degrees, with pain in the right side, diagnosed appendicitis. A normal appendix was removed, but the septic condition continued for four months, with symptoms apparently localizing in the right kidney. Absolutely clear urine persisted throughout the entire course, except on one occasion, when a Streptococcus hemolyticus was obtained. A diagnosis was made by the urologist, from the pyelogram and intravenous urogram, of a Streptococcus cellulitis around the middle calyx of the right kidney. Through lack of coöperation, an x-ray denture was not obtained until he developed a toothache at the end of the four months of septic temperature, disclosing an abscess on the root of another tooth, on the extraction of which his temperature dropped to normal within forty-eight hours, where it has since remained.

Case 7.—A woman, twenty-nine years old, complained of urgency and frequency shortly after the onset of a crop of boils on the buttocks. The concentrated sediment of a "clear urine" showed a good smear of staphylococci with no pus. It cleared up with bladder irrigations and urinary antiseptics along with the disappearance of the boils. Three years later she again had the same bladder symptoms, with staphylococci in a "clear urine." This time she complained of pain and soreness in the rectum, and on the removal of an anal fissure and a rectal cryptitis by a proctologist, her attending nurse volunteered the statement that her bladder capacity had increased from five to twelve ounces within forty-eight hours, and along with the urinary antiseptics and bladder irrigations her urine is again sterile.

CONCLUSIONS

1. Foci of infection play an important part in the causation of urinary tract infections.

2. In vague septic conditions more attention must be paid the urinary tract as a possible location of infection, in spite of the negative clinical examination of the urine.

3. Dentists should be taught to recognize more of the medical and surgical aspects of an infected alveolar process.

4. Before condemning patients with bladder symptoms with "clear urine" as neurotics, we should send larger quantities of bladder urine to the bacteriologist with the request that the examination be made on the concentrated sediment of the entire specimen.

5. Children should be watched more closely during the tooth-cutting age, and attention given to dental care and hygiene. Also, during the septic reactions, the urinary tract should not be forgotten, and more exacting examinations should be made for the presence of bacteria in the "clear urine."

490 Post Street.

DISCUSSION

Robert V. Day, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Dillon has brought to our attention some particular phases of urinary infections which are often overlooked.

I should like to emphasize his meaning by using the term "seemingly clear," or "nearly clear urine." In such cases the specimen is apt to be of low specific gravity and, hence, exceedingly diluted. By greatly restricting the intake of fluids for twelve hours, one can frequently obtain a urine of a specific gravity of 1.020 or so, in which case the amount of pus is usually sufficient to show cloudiness to the naked eye except in those cases where only a few bacteria are present in the urine. These cases are often very baffling until observed over a considerable period of time.

Our first duty is to determine the presence or absence of infection by repeated urine examinations and, if present, to identify the organism responsible for the infection. For this purpose, both stained smears (preferably a Gram stain) and cultures are invaluable.

If urinary infection is demonstrated, then one may proceed methodically to discover each and every anatomical focus of infection by cystoscopic and other recognized urologic procedures.

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F. S. Dillingham, M. D. (1016 Story Building, Los Angeles).—In the past a great deal of thought has been given to pyelonephritis, and today Doctor Dillon has called our attention to a phase which, kept in mind, may save a long course of illness by promptly leading to the correct diagnosis. In 1916 Crabtree and others noted that, early in an attack of pyelonephritis, there may be a great drop in phthalein output due to a cloudy swelling, probably involving the tubular portion which is short-lived, and which goes on to complete recovery, as shown by the return of kidney function and even on microscopic sections.

It may be our misfortune to see these patients only in the intervals as in the case of the doctor's wife, who was only three and a half hours away, and not until the eighth examination were bacteria found. Is it possible that in Doctor Dillon's extensive exploration of this patient's kidney some minor kink was relieved, or nerves or lymphatics cut that resulted in freedom from attacks?

When the specimen is macroscopically clear in a suspected patient, Doctor Dillon's suggestion of concentrating the smear to be examined is as important as running the centrifuge at high speed for a longer interval when searching for tubercle bacilli. Also, the freshness of the urine specimen is of importance, as many come with specimens twenty-four to forty-eight hours old, in questionable containers, that are macroscopically cloudy, and yet after proper cleansing a fresh specimen is found to be free of pus, blood or bacteria.

In 1917, E. H. Stephens stated that simple bacilluria may exist without cells in the urine. Livermore found stasis to be the chief cause of renal infection; as there may be foci, but without stasis, there will be no infection unless there is an overwhelming amount of bacteria. Rovsing found that infection could not be caused without retention or trauma.

In 1916, Eisendrath and Kahn found that infection travels from the bladder to the kidney and perinephritic tissue by way of the lymphatics in the wall of the ureter and not along its mucous membrane. The lymphatic capillaries of the periureteral sheath play a most important part in ascending infection. Franke found that the lymphatics of the ascending colon communicate with those of the right kidney. Cystitis and renal infections following gynecologic operations take place by way of the lymphatics. With care not to cause trauma, emulsions of bacteria were injected into the bladder; (Bacillus coli, Staphylococcus aureus, Proteus vulgaris, gonorrheal pus). Inflammatory infiltrations followed the course of the lymphatics, beginning in the submucous layer of the bladder, especially around the smaller blood vessels in this layer, and this holds true for the lower ureter. Higher along the ureter, in addition to the submucous infiltration, there is infiltration around and in the walls of the blood vessels of the periureteral sheath. Later the other coats become invaded from without inward, the mucosa remaining intact until the infection is well advanced. In the kidney pelvis, the infiltration is seen first in the subpelvic areolar tissue, and again around the blood vessels, the overlying mucous membrane remaining intact. In the kidney the infiltration is seen first around the renal vessels which pass into the parenchyma. In the cortex, between the tubules and around the glomeruli, and as the infection advances, the medulla is invaded in the same intertubular manner, and finally infiltration breaks into the lumen of the tubule. The infiltration follows closely the lymphatics which allow of communication between the cortex and those penetrating the true capsule which, in turn, communicate with the perinephritic tissue. They are convinced, as Bauereisen and others assert, that there is free communication between the lymphatics of the bladder and of the ureter, and that the lymph current is upward. The connecting link between the lower ureter and those within the kidney is along the lymphatics of the subpelvic areolar tissue which surrounds the blood vessels as they enter the kidney tissue. In none of the laboratory animals were the bacilli recovered from the heart's blood. Lymphatics of the lower genito-urinary tract, David MacKensie and A. B. Wallace (*Journal of Urology*) conclude: "Dye injected in small quantities in rabbits to different areas of the bladder wall, different levels of the ureteral wall and cervix, is absorbed and passes to the common iliac group of glands, either directly or through interposed smaller nodes, then upward toward the thoracic duct, and the implication from one series was that the dye passes to the blood stream and to the kidney."

Examine neurotics with special care. The term usually covers the fact that a correct diagnosis has not been made, not only in the strong longshoreman or ambitious young person types, but also in weak nervous patients suffering from chronic absorption from undiagnosed foci as have been mentioned, and stasis in the intestinal as well as the urinary tract. We cannot always get a perfect history, as one woman whose symptoms were unquestionably pyelonephritis with a severe cystitis, but whose upper urinary tract on repeated examination was found negative. Later it was brought out that a bilateral pyosalpingectomy had been performed, and due to the resultant adhesions there was direct infection of the bladder, causing the severe cystic symptoms.

Chronic seminal vesiculitis has been another source not mentioned by the author, and has caused acute attacks so severe that more than one patient has had an emergency appendectomy performed. One of our own patients, a boy of nineteen (with no symptoms referred to the kidney, ureter or bladder), complained of an acute, mild, nonspecific urethritis, which would clear up with a few days' treatment, only to recur. After a month or so he voided a small ureteral calculus, when all of his symptoms were relieved. This emphasizes the necessity of a careful history and a thorough urologic study, even in those patients in which the causes may seem very simple. Red blood cells found in the urine and not accounted for should call for an examination, including intravenous urography and, if warranted, followed by a retrograde x-ray study.

In 1927 Eisendrath made a plea for the early use of the indwelling catheter, but each patient must be handled individually, because there are some acute cases in which lavage and catheter drainage aggravate the condition; and yet the same measures during another attack may act like a charm. (Hooe left a catheter in one kidney eight days and in the opposite kidney fourteen days, with no untoward results.)

Modern treatment of pyelonephritis should include the stimulation of the endocrines that have to do with infections.

Doctor Dillon has called our attention to a condition which we may meet clinically daily, and yet about which very little has been written or said.

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Charles P. Mathé, M. D. (450 Sutter Street, San Francisco).—Doctor Dillon has presented a paper in which he stresses the point that many infections of the urinary tract are overlooked because of inadequate examination of the urine. In cases in which pyelonephritis is suspected, and in which the urine is found to be clear, repeated examinations of catheterized specimens should be made because pus and bacteria might occur in showers. However, if one takes the care to make these repeated examinations he will usually encounter pus and the infecting organism. Occasionally pus and organisms fail to find their way into the bladder because of some obstructive lesion in the ureter such as a stricture or edema. In these a complete cystoscopic examination is necessary to establish a diagnosis.

When one encounters polypi on the neck of the bladder and in the posterior urethra, one should look for infection in the prostate gland and in the kidneys. These are often secondary to kidney infections, and this phenomena is often observed in the female.

The rôle of foci of infection in the production of chronic pyelonephritis has long been recognized, but not sufficiently emphasized. Years ago Rosenow, and Bumpus and Meisser demonstrated that the green-producing streptococci, originating in foci such as teeth and tonsils, have a specific predilection for the kidneys. In all cases of chronic infection, abscessed and pulpless teeth, and infected tonsils should be removed. Unfortunately, in many cases these are removed too late, when irreparable damage to the kidneys had already taken place. We have observed that, following removal of these primary foci, a severe general reaction may follow which might be accompanied by an exacerbation of pyelonephritis. This phenomena may be considered as positive evidence of the original infective focus. Modern treatment of chronic pyelonephritis should consist of systematic eradication of other possible foci, as well as infections of the skin, prostate, seminal vesicles, sinus, ear, etc. Chronic constipation and stasis in the upper and lower urinary tract should also be corrected, as these play an important rôle in the production of chronic pyelonephritis.

I recall a patient possessing a huge pyohydronephrosis presenting chronic pyuria which had been treated for chronic prostatitis for two years by a competent urologist. Because of pain in the upper abdomen, a surgeon diagnosed chronic colitis; however, on encountering a mass in the right upper abdomen, he suspected a kidney lesion and referred him to me for examination. A complete urologic study revealed a huge infected hydronephrosis secondary to an aberrant vessel, and nephrectomy cured the patient of his pyuria. I observed a similar patient presenting calculus pynephrosis who had been treated for chronic prostatitis in one of our clinics for seven years. These experiences should emphasize the importance of making a complete urologic investigation in all cases presenting chronic pyuria.

The internist and general surgeon often confuse pyelonephritis with influenza, abdominal lesions such as appendicitis salpingitis, gall-bladder disease, gastro-intestinal lesions, etc. As Doctor Dillon has so well pointed out, the distinguishing feature in its differentiation lies in painstaking, repeated urine analyses, including centrifugalization of the urine over a long period of time, and making careful cultures.

THE LURE OF MEDICAL HISTORY†

THE HUNTERS IN EMBRYOLOGY*

By A. W. Meyer, M.D.
Stanford University

II**

In addition to many fine representations of the pregnant uterus, this costly volume of William Hunter's contains drawings of dissections of the latter, and representations of the ovaries and of placentæ injected with colored wax from the uterine and umbilical vessels. Although it was the dissection and study of a doubly injected uterus, with the injected fetus *in loco*, that convinced John of the independence of the maternal and fetal circulations, the relationship of these circulations is left without comment in William's famous treatise. It is true that William referred to "RR" as "Veins emerging from the substance ot the placenta and broken through at its surface, where they were passing into the womb" in connection with Plate 19, and that he said in connection with Figure II, Plate 24: "Most of the blue wax, which was first injected by the veins of the womb, was driven on towards the internal surface; and the red wax, which was afterwards injected by the arteries, was lodged principally in the outer parts; but the two colours were, more or less, blended through the whole." In one of the legends accompanying Plate 5, he spoke of "ee" as "injected veins, of a flattened figure with numerous anastomoses, passing from the womb to the placenta in a very slanting direction." "LL" of Figure 1 of Plate 24 is of "The placenta, adhering to the womb. None of the wax, injected into the vessels of the womb, had passed into the branches of those vessels which compose the navel-string; . . . but the cells, or interstices in the spungy part of the placenta, were universally loaded with wax, either the blue, which was injected into the veins of the womb, or the red, which was thrown into the arteries." In connection with "BBB," Figure 1, Plate 29, he said: "The round surface, enclosed by that edge, is the outer surface of the placenta, which had adhered to the womb. In separating those two parts, many arteries and veins were torn through, one part of each remaining with the womb, and the other with the placenta."

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†A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

*From the Department of Anatomy, Stanford University.

** Part I of this paper was printed in the November issue, page 420.

ON THE INDEPENDENCE OF THE FETAL AND MATERNAL CIRCULATIONS

Although these words leave the crucial conclusion to the insight and inference of the reader, it may be recalled that William said that his "discovery" of the independence of the fetal and maternal circulations had been acknowledged by Haller thirteen or fourteen years before the disagreement with his brother John in 1780, in Haller's *Elementa physiologiæ corporis humani,* Vol. 8, p. 220, which appeared in 1766. However, instead of having credited William with the discovery, Haller[17] merely gave a brief summary of William's ideas in an addendum, retaining the contrary idea in the text and saying that Hunter's ideas regarding the decidua have been "partly corrected and partly confirmed." According to Haller's statement in this addendum, William believed that a liquid injected into the vessels of the uterus "pours into every cellular part of the placenta, and from these cells returns into the broader veins of the uterus. None of it passes into the branches of the umbilical vessels. When the umbilical artery is filled with a colored liquid, while the placenta still adheres to the uterus, the branches of the umbilical arteries and veins are all completely and readily filled; yet nothing passes into the vessels of the uterus, unless the liquid has poured into the cells of the placenta." Haller hence merely stated that William believed that the two circulations were independent without characterizing the idea as a discovery. Since this was written in connection with a historical summary of the idea, it is not without significance.

Teacher[9] (1900) concluded that ". . . it is unreasonable to suppose that they [the injections] were figured then [1750], yet only understood in 1754." (p. lvi.) But it seems equally strange that William should have remained silent in 1774 in regard to what he said, in 1780, he so firmly believed and thought he had discovered in 1754. I do not know upon what grounds Teacher[18] (1899) stated that William's conclusion regarding the distinctness of the maternal and fetal circulations "was, as Hunter was aware, strictly speaking, not a new discovery" (p. 32), but if justified, it robs William of his claim and reveals him in disparaging light. It may well be true, as Teacher held, that William Hunter presented the anatomical proof that the two circulations do not mingle, yet the real question is not whether he presented this proof, but whether he fully accepted it for man, before John, and that does not seem to have been the case. This point is referred to by an anonymous auditor[14] of William's lectures who recorded him as saying that

> These appearances I first saw in a cat that was pregnant which I injected from the uterine vessels, after which I injected by the navel string. The injection was distinct, I afterwards saw the same in a bitch. These discoveries were early in life, and taught me to believe that the same course of things existed in the human species, though I could not demonstrate it, not having had an opportunity to inject a pregnant uterus; but soon after I did meet an opportunity, & the appearances staggered me. For after injection of the parts, I found the uterine injection filled up a great part of the placenta &c. which on examination proved to be spongy & cellular. (p. 82.)

Hunter no doubt was "staggered," as well he might have been, because the injections of pregnant human uteri, instead of being unequivocal as in the cat and dog, were confused and seemed to controvert the conclusion reached from injections of the carnivora mentioned. However, according to Needham,[5] "His [William's] injections left no shadow of doubt about the matter, and the way was clearly opened up for the study of the properties of the capillary endothelial membranes separating the bloods . . ." (p. 201.)

Since, as stated above, William said that Haller[17] credited him with the "discovery" of the independence of the fetal and maternal circulations, in 1766, it seems all the stranger that this idea was not given explicit expression in the Gravid Uterus, which appeared eight years later. It also is noteworthy that Haller did not adopt William's idea in the third edition[19] of his *Primæ Linæ,* in 1767, but maintained the idea expressed by him in the edition[20] of 1751 and found even in the German edition[21] of 1788 and the English edition[22] of 1801, in which one reads as follows: "This communication of fluids between the uterus and placenta, seems to be demonstrated . . . lastly, from the passage of water, quicksilver, tallow, or wax, from the uterine arteries of the mother into the vessels of the placenta, as observed, and lately confirmed by eminent anatomists." (pp. 437-438, Section 891.) Two eminent anatomists who thought that they had proven this, according to Fasbender, were Cowper (Bidloo's Anatomy, given out by Cowper at Oxford in 1697, in his own name) and Noortwyk (Uteri humani gravidi anatomia et historia, Lugd. Bat., 1743).

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[17] Haller, Albrecht von: Elementa physiologiae corporis humani. Tomus octavus. Fetus hominisque vita. Bernae, 1766.

[18] Teacher, John H.: William Hunter, anatomist: a lecture with demonstration of preparations from the obstetrical series of the Hunterian museum. Glasgow Medical Journal, 52:15-34, 1899.

[19] Haller, Albrecht von: Primæ linæ physiologiæ in usum prælectionum academicarum, ad editionem tertio acutam and emendatam expressæ. Accedit rerum index. Edinburgi, 1767.

[20] ——: Primæ linæ physiologiæ in usum prælectionum academicarum, auctæ et emendatæ. Gottingae, 1751.

[21] ——: Grundriss der Physiologie für Vorlesungen. Nach der vierten lateinischen, mit den Verbesserungen und Zusätzen des Herrn Hofrath Wrisberg in Göttingen, vermehrten Ausgabe, von neuem übersetzt und mit Anmerkungen versehen durch Herrn Hofrath Sömmerring in Mainz, mit einigen Anmerkungen begleitet und besorgt von P. F. Meckel. Berlin, 1788.

[22] ——: First lines of physiology. Translated from the third Latin edition. To which is added a translation of the index composed for the Edinburgh edition printed under the inspection of Dr. William Cullen. Edinburgh, 1801.

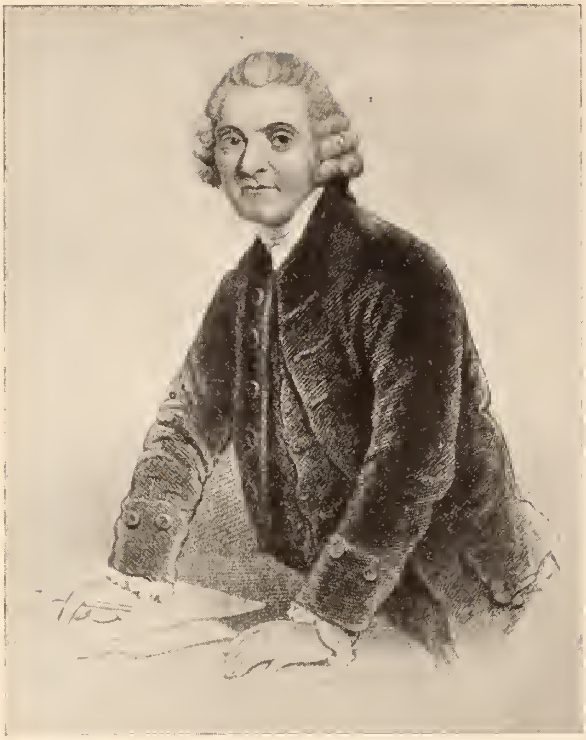

Fig. 1.—The Reynolds portrait of William Hunter, after Peachey, 1924.

The above opinion was expressed also in Volume 1 of Haller's Physiology,[23] which appeared in London in 1754, for it is there asserted that:

> This communication of the vessels, appears evident, from the loss of blood which follows from a separation of the placenta in a miscarriage; and from the blood of the foetus being exhausted from an haemorrhage in the mother; from haemorrhages that ensue from the navel-string, so as to kill the mother when the placenta has been left adhering to the uterus; and lastly, from the passage of water, quicksilver, tallow, or wax, injected from the uterine arteries of the mother into the vessels of the placenta, as is confirmed by the most faithful observations; to this add the cessation of the menstrual flux in the mother, which quantity of blood must of necessity be taken up by some other part, viz. the foetus. (p. 306, Sect. 830.)

Haller's idea of the nutrition of the fetus, and its relation to the mother, is very interesting, and is indicated by the following words from the edition[24] of the First Lines published in Edinburgh in 1786:

> There, in the common surface of the uterus and placenta, a communication is made, by which the uterus sends to the foetus, first that white serous liquor not unlike milk, and lastly, as it seems, red blood itself. This communication of the humours seems to be demonstrated by the suppression of the menses in women with child, whose blood must be turned into another channel; from the loss of blood which follows from a separation of the placenta in a miscarriage; and from the blood of the foetus being exhausted from an hemorrhagy in the mother; from hemorrhagies that ensue from the navel-string, so as to kill the mother when the placenta has been left adhering to the uterus; and, lastly, from the passage of water, quicksilver, tallow, or wax, injected from the uterine arteries of the mother into the vessels of the placenta, as is confirmed by the most faithful observations. But that it is blood which is sent into the foetus, is evinced by the magnitude of the sinuses of the uterus and placenta; the diameter of the serpentine arteries of the uterus; the hemorrhagy that follows, even when the placenta is very slightly hurt; but especially by the motion of the blood, which, in a foetus destitute of a heart, could only be given to the humours of the foetus by the blood of the mother. (pp. 211-212, Sect. 891.)

In a footnote to this passage, it is stated:

> Of the two most noted conjectures which usually explain the communication of the uterus with the placenta, resorption, or the immediate anastomosis of the blood-vessels, the last has always had the most partisans. I am sorry that various arguments, sufficiently weighty, prevent me from so easily embracing the same side; which arguments my celebrated pupils, Balthasar and Moeller, have already mentioned, and which shall now be partly delivered by myself.

Among these arguments is the following:

> By the most successful injections, made with all due care, once into the uterus of a pregnant woman who died in the seventh month of gestation of a wound, several times into the womb of mares, cows, goats, rabbits, dogs, and cats, &c. preparations of which I possess, I never could convey the smallest quantity of the most subtile liquor into the uterus from the vessels of the cord, nor from the vessels of the uterus into the placenta: the liquor entered only the cellular texture of the fungous chorion, and filled it with irregular particles.

I do not know whether John was unfamiliar with the teaching and the work of Alexander Monro primus (1696-1767), but it is rather difficult to see how William could have been, since it is stated in the Dictionary of National Biography[25] that he "spent the winter of 1740-1741 under 'Monro primus' . . . ," who, as early as 1734, according to Cole,[26] "published a striking but neglected paper in which the independence of the maternal and foetal bloods in the placenta is for the first time placed beyond question by injection experiments." (pp. 324-325.) The paper referred to by Cole is entitled " 'An Essay on the Nutrition of Foetuses,' *Medical Essays, &c.*, Edinburgh, 1734, vol. ii, 12mo.," of which Cole said some copies are dated 1733.

Sprengel[27] also had called attention to the fact that the elder Monro had determined the existence of "muscular fibers in the uterus and had rejected the idea of the direct communication of the maternal and fetal vessels." (p. 322.) He cited the Medical Memoirs of the Royal Society of Edinburgh, Vol. 2, p. 128, as his authority, but the reference in the third German edition[28] (Halle, 1828) is to the "Essays of a soc. at Edinb., vol. 3. p. 275; vol. 4. p. 450." (p. 213.) In this third

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[23] ——: Dr. Albert Haller's Physiology; being a course of lectures upon the visceral anatomy and vital œconomy of human bodies. Vol. 2. London, 1754.

[24] ——: First lines of physiology. Translated from the correct Latin edition printed under the editorship of William Cullen, M. D. and compared with the edition published by H. A. Wrisberg, M. D., Professor of Göttingen. To which are added the valuable index originally composed for Dr. Cullen's edition; and all the notes and illustrations of Professor Wrisberg, now first translated into English. Vol. 1. Edinburgh, 1786.

[25] Bettany, G. T.: William Hunter. Dictionary of National Biography. New York, 1891.

[26] Cole, F. J.: The history of anatomical injections. Studies in the history and method of science edited by Charles Singer, 2:285-343. Oxford, 1921.

[27] Sprengel, Kurt: Histoire de la médecine, depuis son origine jusqu'au dix-neuvième siècle. Traduite de l'allemand sur la seconde édition, par A. J. L. Jourdan. T. 4. Paris, 1815.

[28] ——: Versuch einer pragmatischen Geschichte der Arzneykunde. Dritte, umgearbeitete Auflage. Th. 5, Abt. 1. Halle, 1828.

German edition Alexander Monro, Sr., and his sons, Donald and Alexander, are credited with having done much, experimentally and otherwise, to establish the correct view regarding the relations between the maternal and fetal circulations. Roederer (1725-1763) is likewise given credit for having done this and there can be no doubt regarding Monro, Sr., who wrote:[29] " . . . I cannot be more certain of anything than that there is no anastomosis or continuity of these vessels in cows." (p. 388.) He then quoted from Vieussens (Dissert. de Structura et Usu Uteri, &c., § 56):

"And again, 'The effusion of blood at birth, without doubt was also the cause why several old anatomists, who were little acquainted with the natural œconomy of the human body, yea and Mr. Mery, believed that the arteries of the womb directly opened into the veins of the placenta, and that the arteries of the placenta opened into the veins of the womb; from which they concluded, that the mother's blood circulated into the body of the foetus, and that the blood of the foetus passed into the mother's body. But the falsity of this opinion, which was refuted by many anatomists of the last century, who were not only skillful dissectors, but very learned natural philosophers, shall be most evidently demonstrated from what I am to say, when I explain the internal structure and the use of the placenta; so that the abettors of it will readily reject it.'" (pp. 390-391.)

It is true that Monro also declared that "The smaller share by far of the blood sent out by the umbilical arteries is returned to the uterus, most of it being poured into the umbilical vein by anastomosing canals. This may be seen by injecting liquors into the umbilical arteries of any creature." (p. 392.) But by this he merely allowed for the return of some of the plasma by the "absorbents" (lymphatics) which he believed existed in the placenta. Monro also believed that the maternal and fetal circulations communicated with each other by means of invisible pores too small for the passage of blood cells. This view was in entire harmony with the prevailing view regarding absorption from the intestine to which Monro, in fact, referred.

As Cole said:

> In the description of his plates of the gravid uterus, published posthumously in 1794, William Hunter states that he first injected the vessels of the foetal placenta from the navel string in 1743, but it was only when the plates were first issued in 1774 that this experiment was described. He says that he injected the placenta with wax of different colours—the uterine arteries red and the veins blue, but none of the injection mass passed into the vessels of the navel string. In the 1794 publication further details are added. The placenta of man and quadrupeds, he remarks, is composed of two parts intimately blended—a foetal element, which is the continuation of the umbilical vessels of the foetus, and a maternal, which is an "efflorescence of the internal part of the uterus" . . . When the second Monro and William Hunter were students, it was still believed that the maternal blood circulated through the foetus by the navel-string, and returned to the parental vessels, in spite of the positive demonstration to the contrary by the first Monro. Hunter's belief in injection methods was deeply strengthened by his visit to Albinus in 1748, when the beautiful preparations of the Leyden Professor fired the imagination of the Scots anatomist. (pp. 333-334.)

(To be concluded)

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[29] Monro, Alexander: An essay on the nutrition of foetuses. pp. 369-444 in The Works of, Published by his son. Edinburgh, 1781. Also in Medical Essays and Observations, revised and published by a society in Edinburgh, 2:121-232, Edinburgh, 1734, and 3:267-275, 1735.

CONVERSATIONAL GEMS OF DR. J. P. WIDNEY*

Founder of the Los Angeles County Medical Association: At Age of Ninety-Five Still Active in Literary and Church Work

The world does not need moral soothing syrup—it needs castor oil.

You can help a man without indorsing him.

The trouble with some people is, they have more religion than piety.

It is a moral and civic mistake to try to save people from the penalty of their wrongdoing.

Live so that your life will be the only answer needed to silence slander.

Let the one who pays the bills do the planning.

When growth ceases, death has begun.

The whole cry of old and young is, "Do something to amuse us."

I am my brother's keeper, but I am not his jailer.

If you wish to look into the past, do it with a looking-glass.

Do not turn around. Lot's wife turned around.

A thing you do not need is dear at any price.

It is easier to give money than it is to give work.

There are people so clumsy they cannot turn around without stepping upon themselves.

Democracy should mean something more than dirt.

We judge the orchard by its fruit. The orchard is planted for its fruit—not to be looked at only.

Do few things, but do them thoroughly.

The history of the world may be summed up in one sentence—the struggle for life with plants, animals, and man.

There are dregs in the wine cup.

It's a great thing to die in a stylish neighborhood. It gives one a good send-off.

Tickling the palate makes Death laugh.

Hunger is nature's spur to industry.

Your stomach knows better than your brains what you should eat.

Sugar sweetens the mouth but sours the stomach.

The ultimate tenure of land ownership is occupancy and use.

The way to succeed in life is to help the other fellow

Calling a piece of paper a dollar does not make it a dollar.

The word unspoken does not have to be retracted nor explained.

The observance of the law and the safety of the home depend more upon the church than upon the policeman.

You find yourself wherever you go.

Remember, in business the small order often brings the big order.

The cart is a greater factor in man's uplift than the airplane.

A rotten egg will be worse tomorrow.

The world is perishing of gush.

You cannot make a canary out of a jackass, nor a pound cake out of a sack of cornmeal.

Post the books every night, but plan for the years.

A table blessing: We thank Thee, Lord, for daily food and for our home. Help us to do what is right and to avoid what is wrong. Amen.

Caroline, I think I'll not have time to die. (Said at 92.)

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* Compiled by Rebecca Davis Macartney.

Previous excerpts from the Macartney compilation were printed in the July issue (page 61), August issue (page 171), September issue (page 278), October issue (page 355), and November issue (page 422).

CLINICAL NOTES AND CASE REPORTS

RADIUM IN LESIONS OF THE FACE

By Irving Bancroft, M.D.
Los Angeles

At a recent meeting a prominent surgeon stated, "You cannot use radium without destroying the good as well as the diseased tissue." That opinion, seemingly widespread, is erroneous. Radium can be so filtered that diseased tissue only is destroyed, but in order to do that, the time of exposure, as well as the amount of filtration, must be correct. Destruction, in this case, is accomplished by the prevention of reproduction rather than by actual necrosis.

Unfiltered radium, it is true, destroys all tissue, and when so used as a simple destructive agent, is inferior to the actual cautery because it is not so definitely controlled. On the other hand, when it is desired to destroy only the pathologic tissue and cause no visible scar, radium must be so filtered that the rays of longer wavelength are stopped by the filter, and only those of a shorter wavelength are allowed to pass and act on the tissues.

The heavier the filtration the more nearly the efferent rays are of the same wavelength. As a result of this homogeneity, the time of application becomes the important factor and, by changing the time, different groups of cells in normal skin are destroyed. The epithelial lining of the hair follicles are the most sensitive cells in the skin, and the subcutaneous connective tissue is the most resistant. Assuming the radiosensibility of the skin as 1, the average sensibility of a carcinoma is 0.90 and sarcoma is 0.70. Other abnormal cells vary in susceptibility. Graafian follicles are about five times more sensitive than the skin. In order to get the selective action of radium to its fullest extent, all alpha and beta rays must be cut off and most of the gamma rays of long wavelength. In order to do this with ten milligrams of radium distributed over an area of one square centimeter, a filtration of one millimeter of gold and one millimeter of lead will result in allowing approximately 25 per cent of the soft gamma rays and 93 per cent of the hard gamma rays to pass and be absorbed by the tissue. The soft gamma rays are those which are totally absorbed by 20 millimeters of lead, and the hard gamma rays are those which all pass through 20 millimeters of lead. Such heavily filtered radium requires a longer or shorter period of application according to the amount of radium used. Some 240 milligram hours of

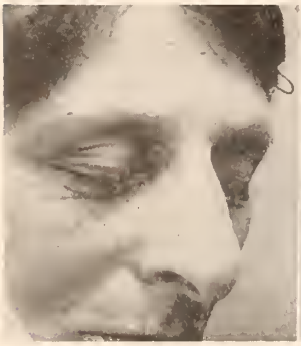

Fig. 1

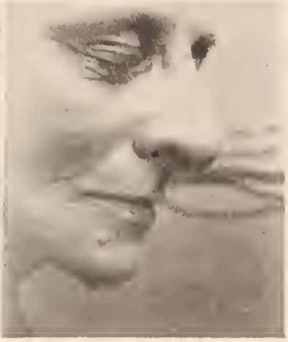

Fig. 2

Fig. 1.—Basal-cell epithelioma, destroyed by 10 milligrams of radium filtered with one millimeter of gold and one millimeter of lead. Time, twenty-four hours.

Fig. 2.—Same as Fig. 1, showing absence of scar formation.

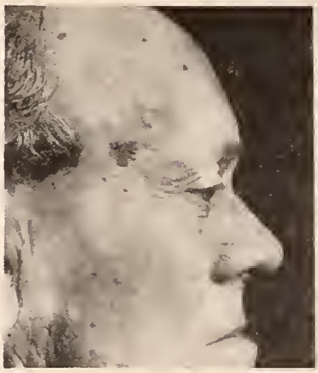

Fig. 3.

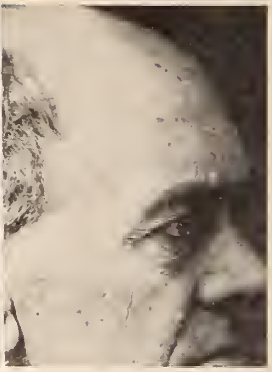

Fig. 4

Fig. 3.—Seborrheic keratosis, destroyed without scar formation by 10 milligrams of radium filtered with one millimeter of gold and one millimeter of lead. Length of application was twenty-four hours.

Fig. 4.—Same as Fig. 3, several months after treatment.

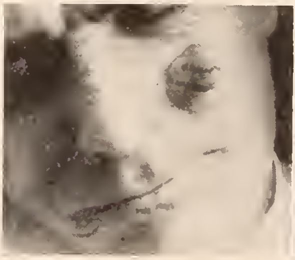

Fig. 5

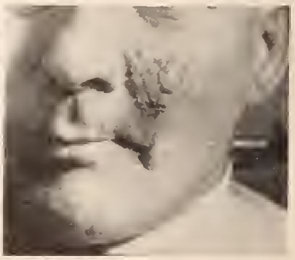

Fig. 6

Fig. 5.—Basal-cell epithelioma. Ten milligrams of radium was applied for twenty-four hours, filtered with one millimeter of gold and one millimeter of lead.

Fig. 6.—Same as Fig. 5, but twenty days later. Shows no destruction of normal tissue.

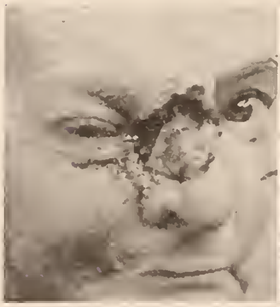

Fig. 7

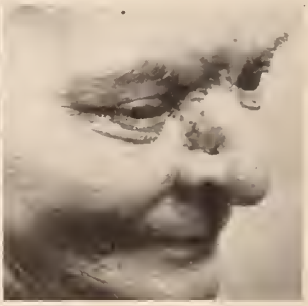

Fig. 8

Fig. 7.—Epithelioma of five years' duration. Fifty milligrams of radium was applied in two different places for periods of eighteen hours each. Total area of the radium was about six square centimeters. Filtered with one millimeter of silver and one millimeter of lead and four millimeters of wax.

Fig. 8.—Same as Fig. 7, but taken thirty-six days later. Shows destruction of pathologic tissue only.

radium filtered as above can be used without permanent destruction of normal cells, and basal cell carcinomas will be destroyed by that dose.

The minimum requirement to filter out the alpha and beta rays is 10 millimeters of aluminum, 2 millimeters of lead, .7 millimeters of gold, or .6 millimeters of platinum. Paraffin, rubber, and other organic filters, have very little effect in stopping any of the rays; 20 millimeters of these substances allow from 91.2 to 97.8 percent of the hard gamma rays to pass. The above statements are worked out from the tables of Albert Laborde, and are based on the coefficient of absorption of the various substances.

The submitted photographs of pathologic conditions of the face are selected from many similar good results, all treated by the principles as stated above.

523 Pacific Mutual Building.

PUERPERAL PEMPHIGUS*

By Saul S. Robinson, M.D.
Los Angeles

ACUTE pemphigus occurring in the puerperium is rare. The cutaneous manifestations of puerperal septicemia are usually purpura, petechiae, and scarlatiniform erythema. The rarest cutaneous findings are bullae, papules, and urticarial lesions. Little reference, however, to acute pemphigus occurring during the puerperium is to be found in the literature.

REPORT OF CASE

Mrs. E. C., aet. 31, was admitted with the diagnosis of pregnancy, full term; pyelitis. The patient had complained of bladder distress one month before her admission. The urine at that time contained 2 plus albumin, and 20 to 30 leukocytes per high dry field. A diagnosis of pyelitis was made.

On August 6 the patient was delivered of a living male child. A perineorrhaphy was performed at the time of delivery.

On August 8 the temperature rose to 100.9 degrees Fahrenheit, and a large bleb, 2 centimeters in diameter, appeared on the inner surface of the left thigh. Small blebs appeared in large numbers, chiefly over the buttocks. Pus appeared at the lower angle of the episiotomy wound.

On August 12 the temperature was 104 degrees Fahrenheit, and a new crop of bullae appeared. Culture from a cutaneous bleb showed a growth of Staphylococcus aureus.

An August 13 bullae appeared on the ears and on the anterior chest. The patient's face was cyanotic and she became comatose. The temperature elevated from 105 to 107 degrees Fahrenheit, and was followed by a severe chill. Examination of the blood showed: hemoglobin, 63 per cent (Sahli); erythrocytes, 3,160,000; leukocytes, 19,600; polymorphonuclears, 92 per cent; lymphocytes, 7 per cent; basophiles, 1 per cent; coagulation time, seven minutes.

On August 14 the temperature was 105 degrees Fahrenheit, and the patient again had a severe chill. The outer layers of the epidermis became loose and detached. A diffuse vesiculo-bullous eruption covered most of the trunk and the extremities. Large areas of denuded skin with a raw, erythematous surface were present. The bullae and vesicles were thin-walled, and could be easily broken. A positive Nickolsky sign was elicited.

On August 15 more than one-half of the body surface was denuded of epidermis. The face was red, dry, and scaly. Examination of the blood showed: hemoglobin, 45 per cent; erythrocytes, 2,630,000; leukocytes, 27,250; polymorphonuclears, 94 per cent; lymphocytes, 2 per cent; myelocytes, 4 per cent.

On August 20 the patient's coma deepened. The temperature elevated from 105 to 108 degrees Fahrenheit before death. The cultures of the fluid from the bullae again grew Staphylococcus aureus.

Necropsy Findings.—The superficial skin was almost entirely removed, and a few bullae were present. There were large denuded cutaneous areas. Examination of the lungs showed adhesions at the apices and hypostatic congestion in each lower lobe. An embolus was found in a vessel of the lower right lobe. Examination of the heart revealed a vegetative growth on the anterior flap of the mitral valve. The growth was in the flap and measured five-tenths centimeter in diameter. The spleen was enlarged, dark colored, and soft. The kidneys were soft, edematous, and swollen. Each kidney pelvis was slightly enlarged and congested. Stripping the kidney capsule showed minute abscesses scattered over the kidney surface. The ureters were slightly enlarged and thickened.

The urinary bladder mucosa was edematous, congested, and had hemorrhagic areas at the trigone. The liver was enlarged, and small grayish discolorations could be noted through its capsule. Section through these discolorations showed abscesses near the surface. The liver lobulations were swollen and considerably obscured. The gall-bladder, adrenals, pancreas, stomach, and intestines were normal.

The uterus was small, involuted, and contained thrombosed vessels. A small amount of grayish exudate was on its mucus surface.

Anatomic Diagnosis.—The anatomic diagnosis was septicemia; pyelitis; cystitis; suppurative hepatitis; suppurative nephritis; chronic fibrous adhesions, apices of lungs; embolus, right lung, lower lobe; acute endocarditis, mitral; pemphigus.

The spleen cultures grew Staphylococcus aureus; a smear from the uterus showed many Gram-positive diplococci resembling staphylococci; a few streptococci were present.

The microscopic sections corresponded with the gross pathologic findings. The endocarditis seemed to be an acute exacerbation of an old fibrous condition. The liver presented a typical nutmeg appearance outside of the suppurative areas. The pathologist expressed the opinion that the patient had had an acute infection in the past which had lain dormant until the present crisis produced an acute exacerbation.

COMMENT

Brocq[1] has classified acute pemphigus of the reported type under the title, "Acute Infectious Bullous Dermatitis," while Pernet and Bullock[2] described the condition as "Acute Febrile Grave Pemphigus." The septic wounds preceding acute pemphigus have been reported to be produced in some cases by dead animal material or by animal bites. Butchers and handlers of dead animals usually suffer from this type of acute pemphigus. Vaccination wounds[3] have also been reported to precede acute pemphigus. Little reference is to be found, however, to acute pemphigus occurring in the puerperium. The infected perineal wound or, more probably, an infection in the involved internal organs may have been the source of the infection in my patient. Staphylococcus aureus was cultured from both the cutaneous lesions and the internal organs.

1930 Wilshire Boulevard.

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* From the Hollywood Hospital.

[1] Brocq: La Pratique Derm., p. 761, 1902.

[2] Pernet and Bullock: Brit. J. Dermat., 8:157, 1896.

[3] Howe: J. Cutan. Dis., 21:254, 1903.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

URINARY RETENTION

I. ETIOLOGY AND PATHOLOGY

Thomas E. Gibson, M.D. (450 Sutter Street, San Francisco).—The term "urinary retention" is defined as partial or complete inability to empty the bladder. Urinary retention must be differentiated from "urinary suppression." Suppression of urine involves partial (oliguria), or complete (anuria) failure of the kidneys to secrete urine. Here the causes are some disease or toxic condition affecting the parenchyma (Bright's disease), reflex nervous influences, obstructive conditions, or a combination of two or more of these factors, as, for example, calculous anuria in which a combination of obstructive and reflex influences may cause partial or complete suppression of urine. Suppression is a failure of secretion involving the upper urinary tract, while retention is a failure of excretion involving, as a rule, the lower urinary tract.

The etiologic factors concerned in urinary retention are classified as follows:

OBSTRUCTIVE

I. *Neoplasms:*
  1. Prostatic hyperplasia.
  2. Median bar (glandular type).
  3. Cancer of prostate.
  4. Other tumors of the prostate (rare).
  5. Extravesical tumors (fibroid of uterus).

II. *Calculus:*
  1. Vesical (ball-valve action).
  2. Prostatic (encroaching on urethra).
  3. Urethral (secondary to prostatic or vesical calculus).

III. *Infections:*
  1. Acute prostatitis with swelling.
     a. Gonorrheal.
     b. Nonspecific.
  2. Abscess of prostate.
     a. Gonorrheal.
     b. Tuberculous.
     c. Nonspecific.
  3. Urethral stricture.

IV. *Trauma:*
  1. Fractures of pelvis.
  2. Straddle injuries (falling astride some object).
  3. Blow on perineum.

V. *Congenital anomalies and acquired deformities:*
  1. Congenital valves of posterior urethra.
  2. Congenital hypertrophy of verumontanum.
  3. Congenital stricture, atresia or stenosis of urethra.
  4. Diverticulum of bladder.
  5. Cystocele.
  6. Hypertrophy of trigone or interureteric ridge.

VI. *Gross hemorrhage:*
  1. Secondary to tumors of kidney or bladder.
  2. Secondary to tuberculosis of kidney or bladder.

VII. *Foreign bodies inserted in urethra:*

NEUROGENIC

A. *Central nervous system (cerebral and spinal):*
  1. Neoplasms:
     a. Primary.
     b. Metastatic.
     c. Extradural.
  2. Infections:
     a. Cerebrospinal lues.
     b. Locomotor ataxia.
     c. Luetic meningitis.
     d. General paresis.
     e. Poliomyelitis.
     f. Acute (transverse) myelitis.
  3. Toxic and degenerative lesions:
     a. Pernicious anemia.
     b. Diabetes.
     c. Multiple sclerosis.
     d. Syringomyelia.
     e. Compression myelitis (caries, tumor, etc.)
     f. Arteriosclerosis.
     g. Apoplexy.
  4. Congenital anomalies:
     a. Spina bifida.
     b. Lumbar and sacral deformities.
     c. Meningocele.
  5. Trauma:
     a. Fractures and dislocations.
     b. Gunshot and other wounds.
     c. Hemorrhage into brain or spinal cord.

B. *Peripheral nerve lesions:*
     a. Postpartum retention.
     b. Postoperative retention.
     c. Sympatheticotonia.
     d. Infectious fevers.

It is evident, from this sketchy outline, that the causes of urinary retention are multitudinous, and that, therefore, the greatest care and skill are required in their diagnosis and treatment. Prostatic hypertrophy is the most frequent obstructive cause of urinary retention, while syphilis is the basis of the majority of cases of neurogenic urinary retention. The clinical picture is frequently complicated by the fact that retention of urine is not always due to a single factor. Two or more obstructive factors may be involved; and to make the problem more involved, there may coexist a combination of obstructive and neurogenic factors which demand special consideration. For example, inflammatory swelling of the prostate may coexist with actual hypertrophy. In order to properly evaluate the degree and character of the hypertrophy, the inflammatory factor must first be controlled by proper treatment. In this connection, it must be remembered that inflammatory swelling of the prostate may cause complete retention of urine in the absence of any prostatic hypertrophy.

A very common association of obstructive factors is median bar and vesical diverticulum. In these cases the problem as to whether excision of the bar alone, or both bar and diverticulum should be done, calls for decision. A vexing problem which must be met rather frequently is the association of obstructing prostate gland and neurogenic bladder, where a clear-cut indication for prostatectomy is frustrated by the possibility of resultant incontinence. Partial or complete retention of urine is a characteristic of neurogenic bladder in the total absence of a mechanical obstructive factor. Many patients have had the misfortune of being operated on under the mistaken impression that the cause was a bladder-neck obstruction. Three cases of this nature have come to my attention. One was a woman with complete retention in a cord bladder on a luetic basis. Her suprapubic scar was a mute testimonial to an unnecessary operation. Another case was reported (1936) of vesical paralysis associated with cardiospasm, apparently due to a disturbance of sympathetic innervation. Another case under treatment is a boy without evidence of local obstruction or central nervous system disease, yet he has an enormous bladder capacity and large residual. This condition is analogous to megacolon or Hirschsprung's disease, and might be termed sympatheticotonia.

The evening of man's life is often harassed by the specter of urinary retention on the basis of prostatic obstruction. It has been stated that every other man over forty years of age suffers some degree of enlargement of the prostate. Teem (1935) has shown, in a large series of autopsies, that the prostate increases progressively in size from birth to old age. This growth reaches pathologic proportion in perhaps a third of all men over fifty years of age. The frequency with which cancer is the cause of bladder-neck obstruction, either alone or in association with benign hypertrophy of the prostate (15 to 20 per cent of prostatic enlargements are malignant), should impress every man over fifty years of age with the importance of having his prostate palpated once yearly, particularly in view of the fact that prostatic cancer is usually incurable after the appearance of symptoms. The etiology of prostatic hypertrophy has long been of great interest, and of late has received renewed attention, particularly from the endocrine viewpoint. Lower and his associates (1935), on the basis of parabiotic experiments, have constructed a hypothetical mechanism for the control of the prostate, which appears to explain the etiology of prostatic hypertrophy. Inhibin, which probably is elaborated in the tubular cells of the testicle, is diminished in amount as the age of the individual advances, and the spermatogenetic function declines. With the restraint removed, the pituitary becomes hyperactive and stimulates the interstitial cells to elaborate an excess of androtin which, in turn, acts upon the prostate to produce enlargement. In a preliminary report they are encouraged by the results obtained in treating prostatic hypertrophy with the hormone inhibin. Teem finds no histologic evidence which would point to a relation between the interstitial cells and prostatic hypertrophy. Deming and his associates (1935) state that 50 per cent of prostatic hypertrophies in man arise from the periurethral glands of the posterior urethra, which are not subject to endocrine influences, and that there is no pathologic or histologic evidence that the action produced by castration, or any hormone, influences the growth of prostatic hypertrophy. Hirsch (1936) has revived the theory of Ciechanowski, who was the first pathologist to show by pathologic section that many phases of prostatic enlargement exemplified an inflammatory reaction. Hirsch holds that benign pathologic enlargements of the prostate are due to hyperplasia, rather than hypertrophy or neoplasia, and may be satisfactorily explained upon a chronic inflammatory basis.

All the etiologic factors of urinary retention share in common the pathologic sequelae of renal damage as a result of urinary stasis with back pressure and a secondary infection. Consequently, in urinary retention the condition of the kidneys must be carefully taken into account and every effort made to correct the cause before irreparable damage to the kidneys has occurred. The highly developed diagnostic and therapeutic armamentarium, which the modern urologist has at his command, has made this goal attainable to a gratifying degree.

* * *

II. SYMPTOMS AND DIAGNOSIS

Harry W. Martin, M. D. (6253 Hollywood Boulevard, Los Angeles).—The symptoms of urinary retention depend, to a great degree, upon the cause and length of time the retention has been present, also whether complete or partial.

In the early stages of prostatic hypertrophy, the bladder may become smaller than normal, which in turn causes frequency of urination or delay in starting of the stream. A small middle lobe may be pulled down by the contraction of the trigone, allowing the bladder to empty completely, and frequently the extra work put on the trigone may cause it to tire and relax before the urinary act is complete, causing micturition in two or more stages.

Usually the bladder becomes unable to empty completely and residual urine remains after the patient has completed urination. This residuum gradually increases in most cases, which reduces the working capacity of the bladder and increases the urinary frequency.

Difficulty of urination increases gradually, accompanied with more hesitation, more straining, a smaller stream, greater frequency, and sometimes there may be blood present and pain. In other cases there may be complete retention and the patient finds that he is unable to urinate at all. The patient may also notice nausea, or even vomiting, headache, loss of appetite, dizziness, drowsiness and impairment of vision, together with a foul breath and lassitude. These symptoms may be due to chronic uremia.

Not infrequently the distress of the patient becomes very great, urination being very painful, difficult, and frequent. The patient's rest may be disturbed and, especially in cases with large residuals, the renal back pressure changes may present a very grave problem. When infection occurs, the dangers are aggravated: hemorrhage may be a very prominent symptom. In the aged, cerebral symptoms produced by arteriosclerosis are not infrequent. Pain and irritation vary greatly.

Diagnosis. — The bladder should be carefully palpated and percussed to determine its size. Cystoscopy should be delayed until bladder pressure has been reduced to normal and an examination of the blood should be made for blood urea, nonprotein nitrogen and creatinin. A phthalein test should also be made. The amount of residual urine should be noted and checked at least twice. A cystoscopic examination should be made after the above tests, including an x-ray of the kidneys, ureter, and bladder, have been made. The prostate should be examined by the finger in the rectum.

Polyuria, which may cause marked frequency, must be excluded, as must congestion of the trigone, edema, polyps, and cysts.

Infections of the urethra, prostate, and bladder may produce difficulty of urination. Contractures and bars at the vesical orifice may produce the same symptoms as prostatic hypertrophy and can only be diagnosed by careful study. Tuberculosis of the prostate must also be considered, as well as calculi of bladder, urethra, and prostate.

Diverticula of the bladder may cause retention by encroaching on the bladder, or elevating the floor of the bladder and trigone. They may be demonstrated by a simple cystogram. Bladder paralysis due to spinal-cord disease is often the source of diagnostic errors, and a careful study should be made in order to rule it out.

* * *

III. TREATMENT

W. W. Cross, M. D. (1624 Franklin Street, Oakland).—The treatment of retention will depend upon the cause and may be discussed:

First: In patients with a normal urinary tract, the condition is psychic; they are unable to void in the presence of others, the bladder becomes overdistended, the urethra stretched, voiding impossible. A soft rubber catheter relieves the retention, and avoiding overdistention prevents recurrence.

Second: Patients with disease of the spinal cord may have retention, and a soft rubber catheter will give relief. Their management is not to be discussed here.

Third: Simple, uncomplicated stricture; cleansing the external genitals with warm water and soap. The use of a local anesthetic enables one usually to pass an olive-point woven catheter of small caliber. Roughness is never required; prevents success and adds complications. Give fifteen minutes' time for the anesthetic to take effect. Dilatation later should follow.

Fourth: A simple stricture, in which attempts have been made to pass instruments, hemorrhage has been produced, the urethra wounded. The Le Fort's metal catheter or Phillip's olive point can usually be passed after the above procedure.

Fifth: Stricture complicated by abscess. Drainage of the abscess under anesthesia should first be made, and the stricture dilated. A retention catheter left to drain the bladder will usually stop urinary infiltration. When extensive urinary infiltration has developed, free drainage must be established, but the management of this serious condition cannot be discussed under retention, as the condition is one of a grave surgical interest.

Sixth: Old strictures, with urinary fistula and extensive connective tissue formation in the perineum and around the urethra. When the fistula becomes closed, acute retention results. Alcohol is frequently added as a complication. Placing the patient in a hot bath will frequently relax enough that the patient will void, and the canal can be opened; failing in this, operation will be required. Internal urethrectomy has never been one of my sins, and it has appeared to me that patients who have come under my observation have had a complication added rather than a benefit, after submitting to this procedure. Failing to pass an instrument through the urethra as a guide in my own experience, a retrograde operation is the one of choice. When sounds are passed both from above through the bladder and up to the stricture from below, one easily maintains relations, the stricture is easily divided and the canal reëstablished. An indwelling catheter retained for two or three weeks makes it possible to preserve a good canal. When a guide can be passed, the perineal incision is all that will be required. Lest my position be misunderstood, let me say that in the past ten years in my experience of dealing with stricture, operations has been resorted to but upon four occasions. Operation is rarely required and has been resorted to only in the last group, all of the patients having been operated upon before.

During the past ten years my experience with stricture has been large and has afforded an opportunity to observe the results of treatment by others. It is noticeable that operation is rarely required and should be restricted to the type indicated, as better results are obtained when it is avoided.

Seventh: Contracture at the bladder neck. As a rule there is very little difficulty in relieving the discomfort by catheter, and permanent relief is afforded by punch or the resectoscope.

Eighth: Cancer involving the prostate when retention has developed can be relieved by the resectoscope unless the tumor is large, when a suprapubic drain may be required. The management of such patients frequently is a problem. My effort has been to follow a course that guides a patient through a fatal illness with the least discomfort possible. The case under consideration must be the guide.

Ninth: Retention due to adenoma of the prostate usually can be relieved by catheter; this is not always accomplished with ease, but generally, if the soft rubber catheter cannot be passed, one of the single or double Caude catheters can. If a clot obstructs the catheter, forcing a boric solution through will dislodge the clot and the bladder relieved. Failing in effort at catheterization, a suprapubic drain may be required. Many patients so afflicted should not have the back pressure relieved suddenly; the bladder should be gradually decompressed. Whether an indwelling catheter should be installed depends on the toleration to the catheter. Many are comfortable with its use; others tolerate intermittent catheterization, which my own experience has made me prefer. This condition brings one to a consideration of bringing the patient to a stage when removal of the tumor or resection are to be considered. Whether this can be accomplished by the use of the catheter will depend upon the condition of the patient and his response to the efforts made to develop the desired situation. When the kidney function is constant, the blood chemistry lowered, tongue clear, breath odor improved, skin action good, mental condition clear, and the patient eating well, he is in a condition for relief permanently by one of the methods the surgeon may consider will obtain the best result.

Catch Many Food and Drug Offenders During Summer.—Dairy products, fruit, fish, and patent medicines predominate in the recent report of legal actions just issued by the Federal Food and Drug Administration.

Butter containing less than the legal requirements of butterfat represented the most prevalent violation. An aggregate of nearly 71,000 pounds was seized throughout the country. Short weight butter was encountered in only one small shipment, amounting to fifty-six pounds. There were also confiscated 2,900 pounds of butter in an advanced stage of decomposition.

Arsenic and lead residues on fruits brought seizure of the following: 206 crates of cherries, 39 crates of currants, 21 bushels of crabapples, and 614 bushels of apples. Other foods seized because of the presence of a poisonous ingredient were 523 shipping cases of canned sardines and 15,000 pounds of maple sugar contaminated with lead, and 3,300 pounds of calcium phosphate containing fluorin. The calcium phosphate was en route to a manufacturer of baking powder.

Infestation with a parasitic worm was responsible for the seizure of 2,150 pounds of whitefish and related species of fish from the Great Lakes and Canadian lakes area. Other seafood seized during July and August included 3,150 pounds of polluted crabmeat and 914 cases of partially decomposed canned salmon. Other seizures, because of filth and decomposition, involved the following: 635 gallons of dirty cream, 1,520 pounds of decomposed dried olives, 963 cases of tomato puree and 30 of catsup containing mold, 1,150 packages of a partially decomposed fruit spread, and 5,930 cans of a dog and cat food, also partially decomposed.

Frauds on the Purchaser. — Frauds on the purchaser blocked by governmental action are shown by seizure of the following commodities: 307 gallons of a salad oil represented as cottonseed oil when it was, in fact, 90 per cent soybean oil; 16 gallons of a so-called "olive oil" found to consist of cottonseed oil and other vegetable oils, and short volume; 200 cans of a salad oil on which the sole charge was volume shortage; 3,900 jars of short weight peanut butter; 980 jars of short weight preserves; 530 jars of preserves deficient in fruit; 200 cases of tomato puree containing less solid tomato material than is recognized by good commercial practice; 300 pounds of dried apples containing excess moisture; 212 bushels of fresh peaches represented as of grade U. S. No. 1, although below that grade; 8,450 pounds of a "milk" chocolate coating deficient in milk; 2,320 containers or chocolate-flavored "malted milk" deficient in malted milk and some of which carried unsubstantiable remedial claims; 320 packages of so-called "fruit crystals," consisting of sugar, tartaric acid, artificial color and citrus oils, packed in containers shaped like citrus fruits; 976 gallons of "orange juice, sweetened," which was really a mixture of orange juice, pulp, ground peel, sugar, artificial color, and acid; and 4,200 packages of so-called "egg noodles" artificially colored and containing no egg.

Drug Seizures. — Drugs seized during the last two months included one shipment of Bacillus acidophilus blocks found to be lacking in live bacilli, one shipment of substandard sodium fluorid tablets, 1,018 boxes of bandages represented as "sterile" but found to be unsterile, and the following patent medicines:

"Arcady Wor-A-Ton," consisting of copper sulphate, copperas, kamala, chenopodium, anise, ginger, capsicum, and nux vomica, alleged to be fraudulently represented as a treatment for poultry ailments.

"H. P. Healing Balm," a perfumed lead oleate ointment, found to be not antiseptic although represented as such, and represented as harmless in spite of its lead content.

"Hem-Roid," containing aloe, nux vomica, and witch-hazel, alleged to be misbranded because offered for the relief of hepatic congestions.

"Juice-O-Veg," a water extract of plant juices (the product was actually 95 per cent water), offered for the relief of vitamin and mineral deficiencies although practically inert in vitamins and a very poor source of minerals.

"Moxon's Liniment," consisting of 7 per cent ammonia with water, alcohol, camphor and plant drugs, offered for the treatment of rheumatism, neuralgia, spasmodic and inflammatory affections of the muscles or joints, sore feet, dandruff, sore throat, headache, lame back, general exhaustion, inflammation of the lungs, skin eruptions, inflammatory swellings, bunions, and certain ailments of livestock. (The product was also charged to be in violation of the Federal Caustic Poison Act.)

"Nervo Rumat Liniment," consisting of a red-colored mixture of turpentine, alcohol, water and camphor, for rheumatism, lumbago, poor circulation, and pleurisy.

"Silver Crown Hair-Scalp Tonic," a yellow-colored solution of quinin hydrochlorid and glycerin in water and 1.2 per cent alcohol, for dandruff, itching and scaly scalp, falling hair, and eczema.

"Tam," labeled "no drugs" and represented as a "jam" composed of "natural laxative fruits," but in fact containing senna leaves and other plant laxatives with fruit tissues. The product was also moldy.

Criminal Prosecutions.—Criminal prosecutions brought under the authority of the Federal Food and Drugs Act against shippers of adulterated and misbranded foods and drugs were terminated as follows:

Alaska Ice Pack Corporation, Cordova, Alaska; H .T. Domenici, Uyak Bay, Alaska; W. R. Gilbert Company, Inc., Cordova, Alaska; Herbert Heglin, trading as Halibut Bay Packing Company, Halibut Bay, Alaska; Al Jones, trading as Kustatan Packing Company, Anchorage, Alaska; and Washington Fish and Oyster Company, Port Williams, Alaska, partially decomposed canned salmon, fines, respectively, $10, $25 and costs, $25 and costs, $25, $15 and costs, and $26.

Van Camp Sea Food Company, Terminal Island, California, partially decomposed canned tuna, fine $300.

Red Wing Company, Inc., Fredonia, New York, tomato catsup containing mold, fine $100.

Robert J. Meguiar, trading as Mid-West Food Packers, Fowlerton, Indiana, short weight mustard containing bran, and moldy catsup containing added gum, fines totaling $400.

Benjamin Bass trading as the Corner Drug Store, Miss Hilda Frank trading as O'Donnell's Drug Store, Mrs. Catherine A. Hall trading as Hall's Pharmacy, Max Koscow trading as District Drug Stores, Enoch A. Norris trading as Northeast Pharmacy, George R. Salb, Abe Schnider trading as Capital Towers Pharmacy, William T. Kerfoot, Jr., and Louis Wolf trading as Argyle Pharmacy, all of Washington, D. C., incorrectly filled prescriptions, fine of $25 against each defendant, all fines suspended.

United Drug Company, San Francisco, California, substandard elixir iron, quinin and strychnin, fine $75.

Clark Remedies Company, Kokomo, Indiana, "E. O. Clark's Famous Liquid Formula No. 6," consisting of kamala, mineral oil, carbon tetrachlorid, turpentine, sassafras oil and water, represented as a treatment for roundworms, tapeworms, pinworms and other worms in poultry, hogs, dogs, rabbits, and cats, fine $25. . . .

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

CALIFORNIA MEDICAL ASSOCIATION

EDWARD M. PALLETTE .... President
HOWARD MORROW .... President-Elect
W. W. ROBLEE .... Speaker
MORTON R. GIBBONS .... Council Chairman
FREDERICK C. WARNSHUIS .... Secretary-Treasurer

THIS MONTH'S TOPICS*

ASSOCIATION ACTIVITIES

1. *Council Minutes.*
2. *The Season's Greetings.*
3. *Hospital Insurance.*
4. *This, That and This.*
5. *Northern California Trek.*
6. *Corporate Practice.*
7. *State Secretaries' Conference at Chicago.*

PUBLIC RELATIONS DEPARTMENT

1. *Charity Service and Income Tax.*
2. *"Dr." Versus "M. D."*
3. *Medical Service Through Deferred Payments.*

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ASSOCIATION ACTIVITIES

COUNCIL MINUTES†

Minutes of the Two Hundred and Forty-Eighth Meeting of the Council of the California Medical Association

1. Pursuant to the call of the Chairman, the Council of the California Medical Association convened in special session in San Francisco on November 7, 1936, for the purpose of considering the report of its Special Committee on Hospital Insurance and for the transaction of such other business as the Chairman presented for consideration.

2. The meeting was called to order by the Chairman. The following officers and councilors were recorded present: President-Elect Morrow, Speaker William W. Roblee, Chairman Morton R. Gibbons, Chairman of Public Relations Committee Charles A. Dukes, Councilors K. L. Schaupp, Calvert L. Emmons, Carl R. Howson, H. J. Ullmann, A. E. Anderson, A. L. Phillips, C. E. Schoff, Harry H. Wilson, William H. Kiger, J. B. Harris, T. Henshaw Kelly, Editor George H. Kress, Secretary F. C. Warnshuis, General Counsel Hartley F. Peart, and his associate, Howard Hazzard.

Absent: President Pallette, confined to hotel room in San Francisco on account of illness; Councilors O. D. Hamlin and Henry Rogers on account of illness.

3. **Corporate Practice.**—A letter from Percy T. Magan was presented and discussed by the Council.

It was moved by Councilor Kelly, seconded by Councilor Wilson, that since the statement on corporate practice was approved by the Council, having been prepared by the legal counsel of the Association at the direction of the House of Delegates, and is a statement of the law in relation to medical practice in California and an interpretation of the legal and ethical aspects of medical practice, and since it is not aimed at any particular organization, and as no action can be taken against any organization until full knowledge of the operation and management of the organization is had, this report be published in CALIFORNIA AND WESTERN MEDICINE at the earliest possible date. Carried.

4. **Scientific Committee Report.**—Secretary Warnshuis stated that the Committee on Scientific Work had selected as guest speakers, subject to Council approval, Doctors Frank L. Meleney of New York, J. G. M. Bullowa of New York, Fred Adair of Chicago; that Dr. Herbert C. Moffitt of San Francisco would conduct a clinico-pathological conference at the second general session; and that President Pallette had the privilege of inviting one guest speaker in addition to the above speakers.

It was moved by Councilor Emmons, seconded by Speaker Roblee, that the report of the Committee on Scientific Work be approved. Carried.

A letter from the Chairman of the Section on Eye, Ear, Nose, and Throat, asking that they be granted a guest speaker, was presented, and on motion of Chairman of Public Relations Committee Dukes, seconded by President-Elect Morrow, and carried; the request was not granted, such recommendation for guest speakers being limited to the Committee on Scientific Work.

5. **Committee of Five.**—Correspondence regarding the report of the Committee of Five on the medical survey was presented to the Council. Doctors Rodney Yoell, Harry Wilson, members of the Committee of Five; and councilors discussed the functions and powers of the Committee.

It was moved by Councilor Wilson, seconded by Councilor Ullmann, that the legal counsel of the California Medical Association be made available to the Committee of Five and that the Committee of Five be authorized to take such action in conjunction with and under the instructions of the Council or the Executive Committee as will protect the Association's position in the matter. Carried.

6. **Hospital and/or Medical Insurance.**—T. Henshaw Kelly, Chairman of the Special Committee on Hospital and/or Medical Insurance, submitted a verbal report supplementing the written report of the Committee.

He stated that, after discussion with Dr. W. E. Mitchell of Alameda County, who had been asked to sit with the Committee in the absence of Doctor Dukes, Doctor Mitchell had obtained the consent of the directors of the Insurance Association of Approved Hospitals of Alameda County to operate in San Francisco County upon invitation by the San Francisco County Medical Society. Doctor Mitchell further stated that it seemed logical for the Alameda County hospitalization plan to serve as the nucleus for such activities in the Bay region.

Doctor Kelly further stated, upon information from Councilor Schoff, that Intercoast did not want to come into San Francisco or Los Angeles because of the totally different cost problem involved. He then discussed the possibility of coöperation between the Los Angeles County Medical Association and the hospitals of Los Angeles County under the leadership of Mr. Heerman, to the end that a plan might be speedily put into operation in Los Angeles and the surrounding territory.

Doctor Dukes then stated that he thought Alameda County would give consideration to any county that might ask for inclusion in the Alameda organization.

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*All articles listed under this caption, "This Month's Topics," have been written and sent to the Editor by the Association Secretary, Dr. Frederick C. Warnshuis.

† The minutes of the two hundred and forty-seventh meeting of the Council of the California Medical Association were printed in the November, 1936, issue of CALIFORNIA AND WESTERN MEDICINE, page 430.

Doctor Ullmann stated that San Luis Obispo, Ventura, and Santa Barbara counties were anxious to be included in the territories served by the Alameda plan.

After full discussion of the advisability of operating plans at the earliest possible date, it was moved by Councilor Kiger, seconded by Ullmann, that the Council authorize the General Counsel to assist the Los Angeles County Medical Association and the Los Angeles hospitals to formulate a hospital plan in Los Angeles County. Carried.

Doctor Morrow explained the extension of curative medicine by the Federal Government into health departments which had formerly limited their field to preventive medicine. It was felt that the county societies and the health departments should work out a plan so that if the Federal Government decided to extend the Social Security Act to transient camps, indigents, etc., the problem could be handled through the health department and the county societies.

It was felt that, in accordance with President Roosevelt's assertion that individual communities should carry the burden of care for their own people, the California Medical Association should let it be known that we are ready to care for the poor in California.

It was moved by Councilor Wilson, seconded by Chairman of Public Relations Committee Dukes, that this discussion is the consensus of opinion of the Council, and it suggests that its committee work along these lines. Carried.

7. **American Medical Association Appeals.**—Doctor Dukes, representative of the Council at the appeals before the Judicial Council of the American Medical Association of Doctor Smith, et al., and Doctor Callison, et al., presented a report on the hearings and stated that the decisions had not yet been rendered.

8. **Recess.**—At this point a recess was called for luncheon.

9. **Call to Order.**—The Council was called to order after the noon recess by the Chairman, Morton R. Gibbons.

10. **County Hospitals.** — Resolution of the Riverside County Medical Society regarding the care of part-pay patients in county hospitals, was presented and discussed. Doctor Roblee stated that a ruling was desired that could be used as a guide by county societies throughout the State.

It was moved by Speaker Roblee, seconded by President-Elect Morrow, that the matter be referred to a committee of three for study and recommendations to the Council at its next meeting. Carried.

11. **Hall of Medical Science.**—Secretary Warnshuis stated that the final report of the Committee on the San Diego Fair showed outstanding bills of approximately $600 which included a bill for $300 for a film prepared by Doctor Foord, which had never been used, the preparation of which was authorized by Doctor Toland.

It was moved by President-Elect Morrow, seconded by Editor Kress, that the matter of film cost be referred to the Auditing Committee. Carried.

12. **Hospital and/or Medical Insurance.** — Further discussion was had of hospital and medical service plans.

It was moved by Councilor Kelly, seconded by Councilor Anderson, that the Council, by resolution, urges the coöperation of the Bay counties medical societies with the Alameda County Society in the development of a plan in the Bay region and urges the coöperation of the Los Angeles County Medical Association with the hospitals of Los Angeles County, to the end that they will establish a hospital plan there; and also urges the coöperation of all other counties in one of the plans approved by the California Medical Association, and that members of the California Medical Association individually and collectively give the matter their earnest assistance and coöperation; and further that the Committee on Hospital and/or Medical Service be instructed to proceed as rapidly as possible along these lines and formulate legislation on the basis of a public corporation or otherwise. Carried.

13. **Legal Department.**—It was moved by Councilor Ullmann, seconded by Editor Kress, that the proposed disbursement for printing expenses be referred to the Auditing Committee. Carried.

14. **Papers Presented at Annual Session.**—After discussion, it was moved by Editor Kress, seconded by President-Elect Morrow, that pursuant to the by-laws of the Association and the rules governing the presentation of papers at annual sessions, the Council, owing to conditions obtaining in the special instance cited, cannot make an exception and grant permission for publication elsewhere of the paper presented by the member in question. Carried.

15. **Leaflet on Publication of Papers.**—It was moved by President-Elect Morrow, seconded by Councilor Emmons, that the Editor and the Secretary be authorized to revise and arrange for publication of the leaflet, "Suggestions to Authors." Carried.

16. **Adjournment.**—There being no further business the meeting adjourned.

MORTON R. GIBBONS, *Chairman.*
F. C. WARNSHUIS, *Secretary.*

THE SEASON'S GREETINGS

"The holiest of all holidays are those
Kept by ourselves in silence and apart;
The secret anniversaries of the heart,
When the full river of feelings overflows;
The happy days unclouded to their close;
The sudden joys that out of darkness start
As flames from ashes; swift desires that dart
Like swallows singing down each wind that blows!"
"Holidays"—Longfellow.

* * *

"We ring the bells and we raise the strain,
We hang the garlands everywhere
And bid the tapers twinkle fair,
And feast and frolic—and then we go
Back to the same old lives again."
—Susan Collidge.

* * *

A few weeks and the holiday season will be at hand. To some it will be a period of sacred and meaningful days. To others a tradition, or possibly a custom, to be reënacted. To all our holiday season has its own particular meaning and is observed accordingly. May each member, during this season, experience joy and solace.

Your officers and councilors extend to members and readers a very earnest, a most sincere greeting, and wish that your holiday season be one of happiness and contentment. May the new year find you with eyes turned toward better days, with renewed inspiration and good health. To all a Merry Christmas and a Happy New Year.

* * *

HOSPITAL INSURANCE

The Council convened in special session on November 7 for the purpose of considering and acting on the report of its Special Committee on Hospital Insurance. This report may be found in the Council minutes published in this issue, together with the Council's action.

Hospital insurance is an important subject and problem. It is receiving attention and consideration by large public groups, with an increasing demand that this form of health service be made available on a voluntary basis though there are some who believe that hospital insurance should be compulsory.

The form in which it is made available is of secondary importance. The medical profession's chief concern is that it be not under political direction and that it does not fall into the hands of designing lay and political groups.

The medical profession is the only group that is competent to control and direct the providing of forms of hospital insurance by reason of its knowledge, training and experience, as well as its familiarity with the medical needs of the people.

Members are requested to send in their recommendations on this subject for the guidance of the Council.

* * *

THIS, THAT, AND THIS

(Credit given to several writers for key sentences)

"She keeps a grievance like a dog—as soon as one dies she replaces it with another." So does the member and nonmember when committees or the Association advance new procedures and action. The chronic dissenter grasps a new opportunity to exploitate a grievance or unwarranted criticism.

* * *

"Intimate as soap." A realistic statement. Many misunderstandings would be avoided were we all more intimate and frank in our relationships and dealings with those with whom we come in contact.

* * *

"Irrevocable as a hair cut." All persons have experienced occasions when the afterthought caused them to regret that they had not been more careful of their statements or deeds. There are times when amends are impossible, no matter how earnest the endeavor.

* * *

"He strains his conversation for a cigar." Let the cigar represent the dollar or personal quest. To attain the end there are those who do not hesitate to strain their integrity or utilize undue advantage.

* * *

"Elderly? Why he is so old he gets winded playing chess." Such may be the age of these observations, but it does no harm to now and then repeat certain observations.

* * *

NORTHERN CALIFORNIA TREK

On Friday, October 17, Councilor Rogers and the State Secretary set out on a 1100-mile automobile trek to visit the members in Humboldt, Del Norte, and Siskiyou counties. Up the Redwood Highway in a drizzling rain was no damper of spirits. As noon neared, the sun came out and added to the beauty of the redwood trees. At Garberville a stop was made to interview the local druggist. Here is a community of 350 voters, population of about 1,000, with a summer population of over 3,000 and many tourists. A splendid opening for a well-trained physician to whom progressive local merchants will accord cordial support.

At Eureka that evening, a well-attended meeting of Humboldt members remained in session till 11:15 o'clock. Excellent spirit exists, and questions and answers produced desirable information and understanding.

Saturday the trek extended on north to Crescent City with its well-equipped, modern hospital, where local members make available adequate medical care. Over the winding roads of the Siskiyous, paralleled with brilliant foliage, and scenery, fishermen in the streams, into Oregon, through Grants Pass, and dusk saw us at the Inn in Yreka, with its lore of gold mining days. An evening at bridge and a night of sleep in the crisp mountain climate and Sunday dawned bright and clear.

At 11 a. m., members, some driving 150 miles, arrived for the scheduled meeting. Books might be written about these medical men, their experiences in practice; how one man provides service for the people living in a radius of seventy-five miles, their abreastness to modern methods, their community activities, etc.

Then followed three hours devoted to our mutual medical interests. It was most appropriate for Doctor Bathurst to close the discussion and relate a story of his early days. Doctor Bathurst has been in practice in Siskiyou County and a member for fifty-nine years and still active and abreast of the times. It was a privilege to meet such a distinguished venerable and respected fellow member, who concluded his discussion with advice to the members: "The more I give the more do I receive from my medical society."

At 2 p. m. and home 400 miles away, via Petaluma, it was with reluctance that the invitation to dine was declined. After nine hours "behind the wheel," Councilor Rogers was delivered to his home, and the midnight ferry saw me in the home city, where bed was promptly occupied.

Would that all our metropolitan members could find the time to visit and fraternize with these fellow members in the northern counties. We are proud of them because they honor and uphold our profession.

LEGAL AND ETHICAL ASPECTS OF THE CORPORATE PRACTICE OF MEDICINE*

The House of Delegates of the California Medical Association, at its sixty-fifth annual session held May 25-27, 1936, adopted a resolution instructing the Council to formulate a letter containing an analysis of the legal and ethical aspects of corporate practice of medicine with respect to corporations so practicing and with respect to physicians rendering professional services on their behalf. The Council was also instructed to transmit its letter to all members of the California Medical Association and to those corporations which it felt might be interested in the subject. Pursuant to the resolution of the House of Delegates, we shall undertake an analysis of, first, the legal aspects of corporate practice of medicine, and, second, the ethical aspects thereof.

CORPORATIONS MAY NOT LAWFULLY PRACTICE MEDICINE OR SURGERY

1. *The Status of Corporations with Respect to the Practice of Medicine and Surgery.*—As a matter of law, it is settled beyond all possibility of controversy that, in the absence of specific *statutory* authorization, a corporation, whether or not engaged in business for profit, *may not undertake the practice of medicine or surgery,* including each of their correlated branches—such as obstetrics, gynecology, radiology, urology, pathology, pediatrics, etc. The principle just stated is the premise forming the foundation of every judicial decision bearing upon this subject, and, if the factual problems which arise from time to time were simple and clear-cut, there would be no need of any further discussion with respect to this point. However, individuals have frequently attempted to use the corporate mechanism as a means of obtaining financial remuneration from the practice of medicine or surgery, and, in doing so, have devised numerous complex and intricate schemes having as a common object the avoidance of the law's mandate. Many of the methods devised in an effort to avoid the rule that a corporation may not practice medicine have been judicially considered by the appellate courts of this State and other states. By summarizing as briefly as possible a representative group of these decisions, it is possible to convey a conception of the extent to which the courts have applied the principle of law which forbids corporate practice.

The term "corporate practice of medicine" includes the practice of medicine through agents, employees or appointees of the corporation (*Pilger* vs. *City of Paris Dry Goods Co.*, 86 Cal. App. 277; 6A Cal. Juris., p. 1260). That is to say, a corporation which employs physicians for the purpose of rendering professional services to those members of the public with whom the corporation enters into an agreement providing for medical services when necessary, is practicing medicine contrary to law. For example, in *Pacific Employers' Ins. Co.* vs. *Carpenter*, 10 Cal. App. (2nd) 592, one of the California District Courts of Appeal held that an insurance corporation proposing to furnish medical services to its policy holders through physicians appointed by it, was proposing to engage in the practice of medicine and surgery contrary to law.

It has also been held that an insurance corporation which proposed to furnish medical service to its policyholders through physicians selected by a committee of the policyholders, was proposing to engage in the practice of medicine. As a consequence, the Court refused to require the insurance commissioner to approve the form of insurance policy which the corporation proposed to issue. *Benjamin Franklin Life Assur. Co.* vs. *Mitchell*, 85 Cal. App. Dec. 1058.

Since a corporation may not employ duly licensed physicians for the purpose of furnishing their professional services to members of the general public, it is, of course, obvious that a corporation may not employ unlicensed persons to furnish professional services. *Unger* vs. *Landlords' Management Corp.*, 114 N. J. Equity 68.

The underlying reason which has caused the courts in California and through the United States to condemn any activity upon the part of a corporation which would result in the retention by the corporation (if nonprofit) or its shareholders (if in business for profit) of some of the financial rewards arising from the practice of medicine and surgery, is well expressed in the case of *Hightower* vs. *Detroit Edison Co.*, 262 Mich. 1, 86 A. L. R. 509. In that case the Court stated that it is a fundamental principle of our law that none of the learned professions, including law, medicine, and dentistry, are open to commercial exploitation, as it is contrary to the public welfare to permit a "middleman" to intervene, for the purpose of obtaining a pecuniary reward, into the personal and confidential relationship which exists between members of the learned professions and those members of the public who are their clients or patients. A physician must owe his undivided duty and allegiance to his patient; there must not be a corporation or other layman to whom the physician also owes a duty. If a physician is in effect employed by a corporation, whether it be on a salary, commission or fee basis, there is, of necessity, a divided allegiance which the law will not sanction.

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*A bulletin issued for the information of the members of the California Medical Association, under date of October 12, 1936.

In California there is one exception to the principles which have just been discussed. In 1917 the Legislature enacted the Workmen's Compensation Insurance and Safety Act. There is a specific provision in that statute which requires that employers (which, in effect, means the insurance carrier for the respective employers) furnish the services of a physician to the employees injured in the course of employment. The statute provides that the *employer* shall select the physician; the injured employee may demand that he be allowed to choose between any one of three physicians selected by the employer. It is also specifically provided that employers shall be responsible for the compensation of the physician whose services are secured. For the limited purposes of this statute the practice of medicine and surgery by corporations is specifically authorized. In all other instances, however, the practice of medicine by a corporation is specifically forbidden by law.

In order to determine whether any particular activity upon the part of a corporation is or is not the practice of medicine or surgery, it is only necessary to apply the principle laid down in the *Hightower* case to the particular facts. If the corporation in question, or its shareholders, have been placed in such a position that it or they may secure monetary gain as the direct or indirect result of professional services rendered to members of the general public, then, as a general rule, that corporation is engaging in the corporate practice of medicine and surgery and is acting contrary to law.

2. *Physicians Who Accept Employment with a Corporation Which Is Engaging in the Corporate Practice of Medicine and Surgery Thereby Violate the Medical Practice Act and Subject Themselves to Disciplinary Action by the Board of Medical Examiners.*—Sec. 14, First (*a*) of the Medical Practice Act provides in effect that any holder of a license to practice medicine and surgery in the State of California who assists in or abets the violation of or who conspires to violate any provision or term of the Medical Practice Act, is engaged in unprofessional conduct. Consequently, it seems clear that a physician who acts as an employee or agent of a corporation which is engaged, without specific statutory authority, directly or indirectly, in the practice of medicine, is, by the very fact of his employment, guilty of unprofessional conduct. A physician who renders professional services as an employee, appointee or agent of such a corporation is, without doubt, assisting and abetting the corporation to violate that provision of the Medical Practice Act which limits the practice of medicine and surgery to regularly licensed physicians and surgeons.

A case which arose under the Dental Practice Act illustrates the present point. In *Masters* vs. *Board of Dental Examiners*, 85 Cal. App. Dec. 1086, decided June 19, 1936, the facts were: A corporation, located in San Diego, employed a dentist to render dental services to those members of the public with whom the corporation entered into contracts calling for the performance of dental services. The Dental Practice Act contains the following provisions:

"Any dentist may have his license revoked . . . for . . . aiding or abetting any unlicensed person to practice dentistry unlawfully (Dental Practice Act, Sec. 13)."

The dentist so employed was charged with unprofessional conduct in that he aided and abetted the corporation to practice dentistry. The Board of Dental Examiners found him guilty of unprofessional conduct and revoked his license. The case finally came before a District Court of Appeal, and that court upheld the action of the Board of Dental Examiners.

Returning to the Medical Practice Act, it, like the Dental Practice Act, authorizes the Board of Medical Examiners to revoke the license of any physician or surgeon found to be guilty of unprofessional conduct. Therefore, we may properly conclude that a physician who accepts employment with a corporation which is engaged in the practice of medicine or surgery contrary to law is necessarily violating Section 14 of the Medical Practice Act, and is, as a consequence of such violation, subject to disciplinary action by the Board of Medical Examiners, which may include revocation of the physician's license to practice medicine and surgery. It must be noted, however, that the conclusion just stated does not include employment by any corporation—for there are situations, such as industrial injuries, in which it is perfectly legal for a corporation to employ physicians—the conclusion only covers those situations in which the corporate employer is violating the principle of law which forbids corporate practice of medicine or surgery.

THE ETHICAL ASPECTS OF CORPORATE PRACTICE

In so far as this subject is concerned, we are, of course, interested solely in the ethical position of physicians who become employees, appointees or agents of a corporation which undertakes to practice medicine or surgery contrary to law.

The Principles of Medical Ethics of the American Medical Association are binding upon all members of the California Medical Association (By-Laws, California Medical Association, Ch. II, Sec. 1).

The Principles of Medical Ethics condemn in no uncertain terms the practices under discussion. We quote from Sec. 4, Art. VI, Ch. III:

> It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, group or individual by whatever name called, or however organized under terms or conditions which permit a direct profit from the fees, salary or compensation received to accrue to the lay body or individual employing him. Such a procedure is beneath the dignity of professional practice, is unfair competition with the profession at large, is harmful alike to the profession of medicine and the welfare of the people, and is against sound public policy.

A corporation is always a "lay body" in the eyes of the law, even though all of its members or shareholders are physicians. Thus, any corporation, no matter how worthy its purposes nor how noble its objects, which is illegally engaged in the practice of medicine or surgery is necessarily doing so "under terms or conditions which permit a direct profit from the fees, salary or compensation received to accrue to the *lay body*."

With respect to "direct profit," it must be remembered that, under the law, one of the tests of whether or not a corporation is engaging in professional practices contrary to law is: Are the activities of the corporation such that it or its shareholders will secure fees, commissions or other payments for professional services? It is only when the answer to this question is "Yes" that we have a violation of the rule of law forbidding corporate practice. Hence, a physician who is in the employment of such a corporation is unquestionably guilty of unprofessional conduct. Further comment on the ethical aspects of the corporate practice of medicine would seem unnecessary.

CONCLUSION

We have endeavored to analyze as briefly as possible the legal and ethical aspects of the corporate practice of medicine in accordance with our instructions from the House of Delegates. Necessarily, our analysis merely deals with the general problem.

If you, as a member of the California Medical Association, have good reason to believe from facts within your personal knowledge that any corporation is engaging in the corporate practice of medicine contrary to law, or that any physician is unlawfully aiding and abetting any corporation to so violate the law, it is suggested that you communicate such facts within your knowledge to the secretary of your county society, so that he in turn may report to this office.

Morton R. Gibbons, M. D.,
Chairman of the Council.
F. C. Warnshuis, M. D.,
Secretary.

* * *

ANNUAL CONFERENCE OF STATE SECRETARIES AND EDITORS

The well designed and spacious new auditorium in the remodeled building of the American Medical Association in Chicago was dedicated by the 1936 Conference of State Secretaries and Editors on November 16 and 17.

The following program governed the conference:

Monday, November 16—10 a. m.

Call to Order—Rock Sleyster, Chairman of the Board of Trustees of the American Medical Association.
Address—Charles Gordon Heyd, President of the American Medical Association.
The Michigan Filter System—L. Fernald Foster, Secretary of the Michigan State Medical Society.
The Public Health League of California—Glenn Myers, Los Angeles.
12:30 p. m., Luncheon.

Monday, November 16—2 p. m.

Address—J. H. J. Upham, President-Elect, American Medical Association.
The United States Public Health Service and the Social Security Act—Thomas Parran, Surgeon-General, United States Public Health Service.
The Children's Bureau and the Social Security Act—Miss Katherine F. Lenroot, Chief, Children's Bureau, United States Department of Labor.
Practical Hints on the Preparation of Manuscripts and Illustrations—Richard M. Hewitt, Rochester, Minnesota.

Monday, November 16—6:30 p. m.

Dinner Conference of Editors of State Medical Journals—Holman Taylor, Secretary-Editor, State Medical Association of Texas, presiding.

Tuesday, November 17—9:30 a. m.

Insurance Against Alleged Malpractice—Mr. Thomas V. McDavitt, Bureau of Legal Medicine and Legislation, American Medical Association.
The Scientific Exhibit at Annual Meetings of State Medical Associations—Thomas G. Hull, Director, Bureau of Exhibits, American Medical Association.

Referred for Discussion by House of Delegates

Consultation and Correspondence with Bureau of Legal Medicine and Legislation.
Violation of Laws Pertaining to Narcotics.

* * *

These conferences were initiated in 1910, and this year's conference was the twenty-third that your secretary has attended. The conference affords a valuable opportunity for state medical officials to gain intimate knowledge of conditions and movements affecting medical practice and organized medicine in the several states of our Union. Much confidential information is imparted.

* * *

The Social Security program has been credited as being the entering legislation for federal and state medicine. It was, therefore, with keen and attentive interest that the address of Surgeon-General Parran of the United States Public Health Service and the statement of Miss Katherine F. Lenroot, Chief of the Children's Bureau of the Department of Labor, were listened to. The following are some of the outstanding statements that were made by these two federal officials:

1. We are anxious to make common cause with the medical profession.
2. Our great desire is to work for the common good.
3. Prevention is of first importance.
4. Funds for states will be furnished on the basis of population, financial resources, and public health need.
5. We recognize that it would be unfortunate were we now to crystallize and form a fixed national plan. We must wait to gain experience.
6. Hence, in the beginning we are asking state health departments and agencies to formulate their own programs and budgets which will be submitted for review and approval.
7. We recognize the danger of influence and control, and are guarding against it.
8. Our efforts are nonpartisan.
9. We recognize the danger and the harm that can be done by untrained personnel.
10. We propose to strengthen and extend the work of health departments throughout the country.
11. Each state must meet its own needs.
12. We shall train the personnel.
13. We propose to investigate disease and sanitation.
14. We shall study and improve present public health methods.

* * *

Surgeon-General Parran then imparted what he termed his health philosophy:

1. The health provisions of the Social Security program are here to stay.
2. The state of the public health is a matter of national concern and interest.
3. Control of treatment is important and we must concern ourselves with the existing facilities for diagnosis and treatment.
4. I hope we will have full coöperation.
5. The mass medical problems of a community are of national concern.
6. The Public Health Service is a means, and not an end, for better health.
7. We need to concern ourselves with infant mortality, pneumonia, cancer, heart disease, tuberculosis control, and syphilis.
8. I have no plan to impose on any state.
9. We ask medical organizations to coöperate by appointing suitable committees that will advise and aid.
10. The care of the indigent is going to require study because society is going to demand better care for the indigent.
11. We must study the needs of a state and then make a local approach.
12. I do not believe that there will ever be any national scheme of health insurance or social medicine.

* * *

We are open-minded and pass these statements without comment. They do provide food for serious thought.

The Children's Bureau proposes to interest itself, under similar principles, in the enhancement of the welfare of infants and maternal care. It purposes to coöperate through state and local medical organizations and existing agencies.

Time, therefore, will relate the type, scope and extent of legislative control and provision of medical and health care.

Further comment on the other topics considered by the conference will be presented in subsequent issues.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

Charity Service and Income Tax

From time to time suggestions have been advanced for a movement to obtain income deductions credit for charity services rendered by physicians. These suggestions have not been ignored. Careful consideration and investigations have been had.

Inasmuch as the subject has been brought up anew, the following letter is presented for our members' information.

American Medical Association
bureau of legal medicine and legislation

October 21, 1936.

Dear Doctor Warnshuis:

During Doctor Woodward's absence, I acknowledge receipt of your letter of October 13 relative to a movement to obtain federal legislation enabling physicians to deduct, in the computation of their federal income taxes, the value of the services rendered to charity patients.

The Revenue Act of 1936 provides, by Section 23, that in computing net income there shall be allowed as deductions:

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† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

"(*o*) In the case of an individual, contributions or gifts made within the taxable year to or for the use of: . . .

"(2) a corporation, or trust, or Community Chest, fund, or foundation, organized and operated exclusively for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private shareholder or individual, and no substantial part of the activities of which is carrying on propaganda, or otherwise attempting, to influence legislation. . . ."

In 1920, the United States Commissioner of Internal Revenue, in construing a somewhat similar provision in the Revenue Act of 1918, rendered the following decision:

"Contributions or gifts made within the taxable year to corporations organized and operated exclusively for charitable purposes, which are deductible for income tax purposes from the gross income of individual taxpayers under Section 214 (a) 11, Revenue Act of 1918, have been construed to mean gifts of *money or property*. The value of services rendered to charitable institutions may not be allowed as a deduction under the aforesaid section."

So far as I am informed, the statement rendered by the Commissioner of Internal Revenue in 1920 still obtains. Charitable contributions made to *individuals* are not deductible, whether the contributions are in the form of services or in the form of donations of money or other property.

So much for the present situation. The problem of a physician's deducting, in the computation of his income taxes, the value of the services he gives to charity patients is not so simple as it may seem. In the first place, some convenient and practical way would have to be arrived at by which the value of such services could be computed in terms of dollars and cents, and in doing so the gross value of the services would have to be diminished by the money value to the physician of his hospital connection, if the services were rendered in connection with a hospital patient. In the second place, if a physician should be granted the right to deduct the hypothetical value of such services, as charitable contributions, he might equally well be expected to add to his income the hypothetical value of such services. Unless he first made this addition to his income, it would be difficult to see just how he could take credit for it as a contribution, since he cannot contribute what he does not have. In the end, I cannot see any likelihood that a physician would be any better off under the proposed scheme than he is now.

Furthermore, at the present time every effort seems to be directed toward increasing the federal revenues from taxation. Any legislation, therefore, calculated to reduce these revenues is not likely to receive favorable consideration or even to be kindly received. If the medical profession should be placed in a position of asking for itself a tax reduction at a time when every other group is threatened with increased taxation, a reaction against the medical profession might be aroused that would stimulate interest and favorable action looking toward the establishment of state medicine.

This entire matter was considered by the Board of Trustees in May, 1936, when it was decided by the Board that the time was not propitious for organized medicine to seek the enactment of this legislation.

J. W. Holloway, Jr.,
Acting Director.

* * *

"Dr." Versus "M. D."

In this day when doctor degrees are conferred by academic institutions or law to many individuals, the common noun "doctor" indicates that the possessor of that degree is only a learned man or teacher. This noun or adjective prefix does not indicate or identify the science or profession of the individual. So many persons employ this title that it is impossible to identify the doctor of medicine.

It is suggested, in fact urged, that all who hold the degree of doctor of medicine desist from using the adjective "doctor" as a prefix to their names on their stationary, signs, and when registering, and instead affix the abbreviations, "M. D." to their names.

Identify yourself at all times and in all places when signing your name by appending "M. D." to your name. A moment's reflection will cause you to perceive the purpose of this recommendation. Observe this practice from now on and identify yourself with the profession of medicine.

Medical Service Through Deferred Payments

Several states and a few of their larger county medical societies have inaugurated plans whereby patients may obtain medical services by means of deferred payments. Where these plans have been instituted and have had operating experiences, the reports impart that patients and doctors are satisfied by reason of these financial arrangements.

The Medical Society of Milwaukee County, Wisconsin, is one of the recent county units adopting this plan. The following is their explanatory statement:

How Medical Service Will Aid Your Patient

Perhaps if a hypothetical case is used as an illustration, the manner in which medical service will operate will be made clear.

Mr. X. works in a mercantile establishment. He had learned through publicity given Medical Service that medical care, which his doctor informs him he needs but for which he cannot pay in a regular manner, can be arranged for on a deferred or monthly payment basis, and, if necessary, charges can be reduced to meet his ability to pay.

Mr. X., therefore, goes to his family physician, Dr. J., who agrees that the Service can assist by estimating the total cost of the services needed on the basis Mr. X. can afford. It happens that Mr. X., in the opinion of his doctor, needs an operation for the removal of stones in the kidney. Dr. J. suggests that radiographs are necessary; also the services of a specialist, plus hospitalization.

Mr. X. arrives at the offices of the Service with a proper introduction from his doctor. Prior to an analysis of his ability to pay he is directed to the specialist recommended by Dr. J., who will estimate the cost of his work. Other costs are also ascertained. The budget consultant of the Service will then make an analysis of Mr. X.'s financial situation. Upon the facts obtained from Mr. X. and other sources at the disposal of the Service, the consultant determines that Mr. X. can pay $200 for services which at regular rates would total $300, in monthly installments over a period of ten months.

Dr. J., the family physician, Dr. B., the specialist, Dr. R., the roentgenologist, Dr. O., the pathologist, and the hospital, are informed of the patient's financial situation. With their approval an agreement is entered into between the Service and the patient. As payments are made by Mr. X. to the Service, they will be credited to his account and distributed pro rata to those who have rendered service.

There are variations from this hypothetical case in actual practice. For example: a number of patients will not require some of the laboratory procedures, and others will not require hospitalization. Fundamentally, the procedure to be followed is the same.

Keep in mind that the Service sets no fee for the doctor, hospital or any of the participants, it being understood that charges to be made are those which would ordinarily be made to persons in similar circumstances. It has been the experience of bureaus in other cities, similar to Medical Service, that the majority of patients do not need to have their bills reduced if they are given the privilege of paying in monthly installments.

If a patient has no family physician and comes directly to the Service, he will be given a list of Society members from which he may choose the physician he wishes to attend him. When this choice has beed made the physician will be called and informed of the circumstances, suggesting that the Service will be glad to coöperate with him if he so desires.

Each individual case will be judged on its own merits and arrangements made accordingly—always, however, with the approval of those giving service.

It would seem that it would be advantageous for some of our county societies to inaugurate similar plans.

COMPONENT COUNTY MEDICAL SOCIETIES

HUMBOLDT COUNTY

The Humboldt County Medical and Dental Societies met on the afternoon and evening of October 7 in joint meeting at the Humboldt Golf and Country Club, with the president, J. S. Woolford, presiding.

Fifteen dentists and nine physicians were present. Golf was played in the afternoon, followed by a chicken dinner at 6:30 o'clock.

At eight o'clock papers were read by Drs. L. P. Monson and Don Aubertine on the subject, *Pathology and Treatment of Oral Sinusitis as Taken From the Medical and*

Dental Point of View. The subject was widely discussed, especially by the dentists.

This was followed by remarks from Dr. Charles Falk, Sr., president of the local Public Health League. Doctor Falk presented Doctors Cushman and Gurley, who gave very excellent reports on new legislation which was to be presented to the public, and of vital interest to the dental and medical societies.

Lawrence A. Wing, *Secretary.*

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PLACER COUNTY

The annual meeting of the Placer County Medical Society was held Saturday evening, November 7, at the Freeman Hotel, Auburn. The meeting was called to order by the president, Louis E. Jones, at 8:20 o'clock. In addition to President Jones there were present the following members and visitor:

Members—Drs. L. W. Empey, R. H. Eveleth, P. D. Barnes, Ray C. Atkinson, Vernon W. Padgett, Robert A. Peers, Daniel L. Hirsch, B. W. Hummelt, D. M. Kindopp, Mildred E. Thoren, Harold L. Karo, Max Dunievitz, C. C. Briner, W. M. Miller, J. A. Russell, and C. E. Lewis.

Visitor—Dr. John Napier of Auburn, principal of the Placer Union High School, who had been invited by the secretary to meet with the members of the Society to discuss the presence of the scarlet fever epidemic among high school and grammar school students of Auburn.

Doctor Napier explained the control measures which are being taken to protect the Student Body, and asked for full coöperation of the members of the Society. This coöperation was promised.

Following the approval of the minutes of the meeting of July 11 and of the secretary's and treasurer's reports, the application of Dr. A. S. Churchill of Weimar for membership was read for the first time.

There were a number of case reports by various members.

This being the annual meeting, election of officers was held and the following were unanimously elected: Dr. C. E. Lewis of Auburn, president; Dr. William M. Miller of Auburn, vice-president; Dr. Robert A. Peers of Colfax, secretary-treasurer.

There was no election for delegate and alternate, as Doctor Empey of Roseville and Dr. Mildred E. Thoren of Weimar, delegate and alternate, respectively, hold over for one more year.

Dr. Ray C. Atkinson and Dr. C. C. Briner presented a moving picture, showing *Technique of Suprapubic and Vaginal Hysterectomy.* A vote of thanks was tendered Doctors Atkinson and Briner.

There being no further business the meeting adjourned for refreshments.

Robert A. Peers, *Secretary.*

⁂

SACRAMENTO COUNTY

The regular meeting of the Sacramento Society for Medical Improvement was called to order by the vice-president, Dr. Ray M. Wallerius, at the Auditorium on Twenty-ninth and L streets on October 9, with sixty members and guests present.

The paper of the evening was presented by Dr. Edward F. Roberts of New York City, a member of the professional staff of the Lederle Laboratories. He spoke on *The Management of Pneumonia* and on *Pernicious Anemia,* and his discussion was illustrated with motion pictures. The papers were discussed by Doctors Gundrum, Primasing, Pulford, Railsbach, Reardan, and Scatena.

The application of Dr. Charles V. Soracco of Placerville was read for the second time and voted upon. He was unanimously elected to membership in the Society.

A card was received from the family of our late member, Dr. Hugh Beattie, expressing appreciation for the Society's floral tribute.

A letter from Dr. Etta Farmer of Folsom was read, presenting a gavel to the Society.

A letter from Doctor Warnshuis, advising approval of the Intercoast Hospitalization Insurance Association by the Council of the California Medical Association, was read.

Norris R. Jones, *Secretary.*

SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held at the Santa Maria Club, Santa Maria, Monday evening, October 12, President Gray presiding.

This was a dinner meeting, under the auspices of a group of the Santa Maria members, and the refreshments and the barbecued meats were excellent. A most enjoyable time was had by all.

The speaker of the evening, Dr. John Renshaw of Los Angeles, held his audience fascinated with his interesting and instructive description of the *Gastroscope,* vividly illustrating with colored slides the differential diagnosis of the gastric disorders.

Doctor Renshaw was highly complimented by the membership for his original research work in this field, and it was felt that his availability to the profession of Southern California would be of great value in the early diagnosis of gastric malignancies.

The Santa Maria group are to be congratulated for a most successful and enjoyable meeting.

* * *

The regular meeting of the Santa Barbara County Medical Society was held Monday evening, November 9, in the Bissell Auditorium, President Gray presiding.

President Gray called upon Dr. Caleb Stone to introduce the speaker of the evening, Dr. Dorrell Dickerson of Los Angeles.

Doctor Dickerson gave an extremely interesting and comprehensive talk upon *Intracranial Tumors,* illustrated with lantern slides.

Discussion followed by Drs. Clark, Geyman, Hamilton, Van Paing, Stone, Brush, and Koefod.

Doctor Ullmann, as councilor, reported upon the present status of hospital insurance and advised that the Society take action.

Doctor Markthaler, reporting for Doctor Robinson of the Hospital Insurance Committee, said that the Board of Directors of the Alameda Hospital Insurance group advised against Santa Barbara County joining with that group at this time.

The secretary was instructed to read the action taken by the Council of the Santa Barbara County Medical Society regarding hospital insurance, and Doctor Gray reported that the two hospitals were willing to coöperate, provided they could see a complete copy of the proposed plan, and provided that the plan was endorsed by the County Society.

It was moved, seconded and carried, that the Hospital Insurance Committee be empowered to take any necessary action regarding the adoption of any hospital insurance plan, such action to be under the supervision of the Council.

The minutes of the last Council meeting were read, and then further discussed by Doctor Freidell. The Santa Maria school contract was discussed, but no action was taken, as the legality of the proceedings was referred to the state councilor for an opinion.

Doctor Hare, reporting for the Publicity Committee, said that speakers were being assigned whenever necessary.

Drs. C. W. Henderson, P. F. Munch, Lester Jankay, and Walter M. Anderson were elected to membership.

William H. Eaton, *Secretary.*

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SHASTA COUNTY

The meeting of the Shasta County Medical Society was held Monday, November 9, in the office of Doctor Hansen, Redding, with President M. D. Pratt presiding.

The most important business of the meeting was the election of officers. Dr. O. J. Hansen was elected president for 1937; Dr. C. C. Gerrard, vice-president; and Dr. L. J. Seeley, secretary-treasurer.

The following resolution was passed unanimously:

Whereas, There has been presented to this Society a determination by the California Medical Association that the dues to the State Association for 1937 shall be $15 instead of $10; and

Whereas, Dues in the past have not been productive of sufficiently beneficial results to the medical profession to justify even a State annual assessment of $10; therefore be it

Resolved, That the Shasta County Medical Society hereby protests prospective increase in dues as unjustified and unwarranted.

Shasta County Medical Society.
By Leslie J. Seeley, *Secretary-Treasurer.*

Dr. M. D. Pratt was given a vote of thanks by the Society for his faithful devotion to duty as president for the past two years. It is worthy of note that Doctor Pratt did not miss a single meeting of the Society in that time and that he had to drive 150 miles in order to attend those meetings.

Leslie J. Seeley, *Secretary.*

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SOLANO COUNTY

The regular meeting of the Solano County Medical Societl, held November 10 at the Casa de Vallejo Hotel, was given over to matters pertaining to the conduct of the Society, and no professional discussion was held.

The annual election of officers resulted in the election of Dr. Herman B. Perkins of Vallejo as president; Dr. Carlton Purviance of Fairfield, vice-president; and Dr. John W. Green of Vallejo, secretary-treasurer.

Doctor Green was also chosen as delegate to the 1937 session of the California Medical Association, and Dr. Arvil E. Chappell, retiring president, was chosen as alternate.

John W. Green, *Secretary.*

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TULARE COUNTY

The regular meeting of the Tulare County Medical Society was held on Sunday, October 14, at Motley's Café in Visalia.

In attendance were Doctors Hill, Cronemiller, A. Bond, A. Miller, Furness, Ginsburg, P. Miller, N. Miller, Fillmore, Weiss, Glaser, Matthias, Rosson, Lipson, Preston, Watke, Kohn, Guido, Falk, Zumwalt, and McClure.

Dr. Mark A. Glaser of Los Angeles presented a paper on the *Newer Aspects of the Etiology and Surgical Treatment of Convulsions.* Many lantern slides were used to illustrate the talk, which was well received, and led to a general round-table of discussion.

Dr. A. E. Anderson of Fresno, district councilor, was present and outlined the activities of the Council, particularly with reference to the hospital insurance plan and other proposed legislation.

A vote was taken on the proposed amendment to our by-laws regarding a code of disciplinary procedure, and this was unanimously carried.

Karl F. Weiss, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (42)

Alameda County.—Dean E. Hart, William J. Kennedy, Joseph L. Marriott, Charles Newell Mell.

Kern County.—Eric F. Colby, Carl Louis Moore.

Los Angeles County.—Madeline J. Algee, Montrose M. Bernstein, Fred E. Bradford, George C. Brandt, Albert F. Brown, Claude C. Bunch, P. Price Cobbs, Charles L. Cooper, Frank J. Costa, Michael M. Gurdin, George W. Hewitt, Arthur H. Hurd, Lester Jankay, Russell Johnson, Francis X. McDonald, Clarence H. Nelson, Edward S. Powers, James F. Presnell, Ethel R. Schlesinger, Lawrence W. Smith, M. J. Speigel, Beatrice M. A. Tomblin, Carrol L. Weeks, John Wilbur Whitsett.

Monterey County.—Edwin M. Chase, Howard E. Clark, Frank Hilton Smith.

Riverside County.—Howard A. Wood.

San Francisco County.—Robert D. Dunn, Russell F. Jaekle, John Edward McGuinness, Ambrose Merrill, Lester Sawyer, Lydia Shimkin, William Sullivan.

Santa Clara County.—Harold R. Carter.

Transferred (1)

Elliot Rouff, from Monterey County to Santa Clara County.

In Memoriam

Beard, John Lyman. Died at Berkeley, November 9, 1936, age 49. Graduate of the Hahnemann Medical College of the Pacific, San Francisco, 1913, and licensed in California the same year. Doctor Beard was a member of the Contra Costa County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Goodenow, Norman H. Died at Eagle Rock, October 14, 1936, age 66. Graduate of Rush Medical College of the University of Chicago, 1892. Licensed in California in 1920. Doctor Goodenow was an honorary member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

County Auxiliary Letters

Alameda County

The first general meeting of the Woman's Auxiliary to the Alameda County Medical Association was held at the Claremont Country Club on September 18.

Luncheon was served to sixty-four Auxiliary members. Each table had been individually decorated with mixed flowers of the season. Mrs. Clarence Page presided.

The following recommendations were presented to the Auxiliary:

1. The Executive Board recommends to the Auxiliary the payment of $15 for membership in the Public Health League of California. The recommendation carried.

2. The Executive Board recommends that a year book be printed and that the president appoint a special committee to handle the work. The recommendation carried.

3. The Executive Board recommends that the Student Loan Fund be changed to a Scholarship Fund. After discussion a committee was appointed by Mrs. Page to investigate the matter of Scholarship and Loan Funds, and report at the next meeting.

4. The Executive Board recommends that billheads be printed for Auxiliary use in sending out notices for dues. The recommendation carried.

Mrs. J. R. Henry gave a brief colorful report of the convention held in May in Coronado.

Mrs. Baxter, as general program chairman, gave an outline of the programs to be given for the ensuing meetings.

The aims and purposes of the Auxiliary were brought before the members in a very decisive and interesting way by means of a dialogue between Mrs. Page and Mrs. Baxter.

Mr. Ben Read of the Public Health League of California spoke on *"Who's Who, What's What, and Why."* His talk dealt with the structure of the State Legislature and of the enormous number of bills which are presented at each session, many of which directly or indirectly affect the practice of medicine. He stressed three vital issues which are coming up for voting and asked the Auxiliary to help in campaigning against them. He also stated that the Auxiliary could be of great help in instructing those who are elected from our local districts as to the problems of legislation where it affects medicine.

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† As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Robert M. Furlong, chairman of the Publicity and Publications Committee, Linden Lane, San Rafael. Brief reports of county auxiliary meetings will be welcomed by Mrs. Furlong and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

Mrs. Albert Meads, honorary member of our Auxiliary, asked for continued coöperation from the Auxiliary in helping to get out Christmas Seals for the Tuberculosis Association.

There was no further business and the meeting adjourned to meet in November.

* * *

The annual husbands' dinner given by the Auxiliary to the Alameda County Medical Association was held on Thursday, October 29, at the Claremont Country Club in Oakland.

Mrs. Clarence W. Page, the newly elected president of the Auxiliary, presided at the speakers' table. Seated with her were: Doctor Page, Dr. and Mrs. A. A. Alexander, the latter president-elect of the Auxiliary; Dr. and Mrs. W. E. Mitchel, the former president of the Alameda County Medical Association; Dr. and Mrs. Thomas Clark, the latter past president of the State Auxiliary; Dr. and Mrs. Frank Baxter, the latter first vice-president of the Auxiliary; Dr. Gertrude Moore, secretary of the Alameda County Medical Association; Dr. and Mrs. Don Weaver, the latter program chairman for the husbands' dinner, and the guest artists for the evening.

After the introductions at the speakers' table, Mrs. Page called upon Doctor Mitchel, who responded with a very splendid tribute to the wives of all doctors.

There were two hundred Alameda County doctors and their wives present at the dinner. Mrs. Maxwell Thebaut, as chairman of the decoration, had made the clubroom most attractive and festive by each table having as its centerpiece a golden pumpkin filled to overflowing with the fruits and the grains of the harvest season. Indirect colored lights and tall candles threw soft gleams over the assembly.

The entertainment for the evening was provided by three National Broadcasting Company artists. Benny Walker, editor of the Woman's Magazine of the Air, who gave clever impersonations of "Little Benny," and who was also master of ceremonies for the evening; Miss Jean Cowan, who sang several songs very delightfully, playing her own accompaniments; Armand Girard, baritone, assisted by Mrs. Girard, who thrilled the guests by his very splendid rendition of "Home on the Range," "Glory Road," and "Old Man River."

At the close of the dinner a social half-hour was spent, every one most enthusiastic over the enjoyable evening spent together.

Mrs. John Ohanneson, *Chairman of Publicity.*

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Contra Costa County

The Contra Costa County Auxiliary met on Tuesday evening, November 10, at the home of Mrs. C. R. Blake for an enjoyable social evening.

Members present played contract, and prizes were won by Mrs. H. L. Carpenter and Mrs. L. A. Hedges. Refreshments were served by Mrs. Blake.

A dinner, put on by the Contra Costa County Medical Society, will be held December 12, and members of the Auxiliary will be guests. Scene of the dinner will be the Orinda Country Club.

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Fresno County

The Fresno County Auxiliary was delighted last week to receive a visit from our state president, Mrs. Thornton. Mrs. Thornton was the house guest, while in Fresno, of Mrs. George Walker.

Our meeting on November 4 was in the form of a luncheon, held at the Sunnyside Country Club, with Mrs. Thornton as our guest speaker. The group was so very interested in all that she had to tell us of the aims and ideals, the founding and progress of the Auxiliary. A group of musical selections was heard throughout the luncheon.

In October the program was an unusual and an entertaining one. Mrs. C. M. Vanderburgh, Program Chairman, brought before the group a debating team quite well known throughout the valley. These boys debated the question, *Resolved, That the various states should enact suitable legislation to furnish adequate medical care.* Both sides of the question were well prepared and admirably presented. Considering the strong opinions and prejudices of the audience, the affirmative upheld his points bravely.

A benefit card party is being planned for December, with the Hygeia Committee, headed by Mrs. A. T. Goldberg, in charge. The proceeds will purchase *Hygeia* subscriptions to be placed in libraries, schools, and beauty parlors. We are hoping to have an excellent report of this party for the next issue.

Mildred Diederich, *Secretary.*

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Los Angeles County

The Woman's Auxiliary to the Los Angeles County Medical Association had a delightful meeting Tuesday, October 27, at the Uplifters Ranch in Santa Monica, with 152 present, and with Mrs. Andrew J. Thornton, president of the State Auxiliary, as guest of honor. In answer to the cordial invitation sent out to eligible members, twenty-three new members were added to the roll, and many more were guests. Luncheon was served at twelve o'clock.

Mrs. Harold Crowe, chairman of the Social Welfare Committee, announced plans for the Thanksgiving baskets to be given to thirty families of doctors on relief in the county. She asked for donations of canned goods, sweets, or small packages of staples.

The president, Mrs. Wright, introduced Mrs. Thornton, who spoke briefly on the importance of individual members educating the public in an unofficial way in the interest of scientific medicine.

The chief speaker of the day was Mrs. Steele Stewart, whose interesting subject was *The Medical Set-Up in Hawaii.*

Special music was arranged by Santa Monica members.

Mrs. Robert L. Carroll, *Chairman of Publicity.*

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Marin County

On Thursday evening, October 22, the Woman's Auxiliary to the Marin County Medical Society met with the Marin County Public Health League at a dinner meeting held in the Marin Golf and Country Club, San Rafael.

An attendance of approximately one hundred members and guests filled the dining room of the Club to its seating capacity. All business of the individual branches was dispensed with.

Before introducing the speakers of the evening, Dr. Scott Polland, president of the Marin County Public Health League, expressed his appreciation of the display of interest shown and congratulated the Woman's Auxiliary on its growth, commending the members not only for their own attendance, but also for an increased attendance on the part of members of the Medical Society since the Auxiliary was organized.

The main speakers of the evening were: Dr. Alson Kilgore, Doctor Johnson, treasurer of the League, and Mr. Ben Read.

B. M. Robertson, *Chairman of Publicity.*

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Orange County

More than twenty-five members of the Woman's Auxiliary to the Orange County Medical Association met at the home of Mrs. Harry G. Huffman.

The Huffman home was beautifully decorated with dahlias of all varieties, sent from the famous dahlia gardens of Dr. and Mrs. G. Emmett Raitt.

Mrs. K. H. Sutherland, new president of the group, conducted a short business meeting, at which she introduced her new fellow officers, including Mrs. D. C. Cowles of Fullerton, vice-president; Mrs. L. E. Wilson of Santa Ana, treasurer; and Mrs. G. E. Raitt of Santa Ana, secretary.

Mrs. E. H. Kirsten of Anaheim, program chairman, introduced Mr. Ben Read, executive secretary of the

Public Health League, who discussed pending legislation. Miss Kate Rea of Anaheim, southern district chairman of education of the Federated Women's Clubs, also spoke briefly on proposed amendments.

Other prominent guests introduced to the doctors' wives included a group of San Diego women, all Auxiliary officials. They were Mrs. A. J. Thornton, state president; Mrs. W. H. Newman, state corresponding secretary; Mrs. T. J. Lindemulder, president of the San Diego Auxiliary; and Mrs. C. E. Howard, past president of the San Diego Auxiliary.

At the conclusion of the afternoon's program, Mrs. Huffman served a delicious tea course, with the assistance of her cohostesses, Mrs. Dexter Ball, Mrs. R. C. Harris, Mrs. K. H. Sutherland, and Mrs. G. E. Raitt.

Sacramento County

The regular meeting of the Sacramento Medical Auxiliary was held at the home of Mrs. Hilding Johnson at 8 p. m., September 15.

The minutes of the last meeting were read and approved. Mrs. Brown announced that Mrs. Edward Babcock had been appointed to serve on a board of directors to replace Mrs. Brendel, who has moved to Berkeley.

Letters were read from the secretary of the Community Chest and the Braile Publishing Company thanking us for our donations.

Mrs. Scatena gave the treasurer's report as follows: Savings account, $77.39; commercial account, $99.08.

Mrs. Krull gave the report on work being done at the library at the County Hospital, which now has 304 books and which is well supplied with magazines.

Mrs. Brown reported on work that had been done for the Red Cross during the State Fair. The women served at the booth for lost children at the Fair. Mrs. E. D. Edson told us of the campaign being conducted by the Tuberculosis Association to give skin tests to all school children.

Following the business meeting we were entertained by a review on new books.

Mrs. John D. Lawson.

San Francisco County

The next several meetings of the Woman's Auxiliary of the San Francisco County Medical Society will be luncheon meetings. The first will be held at the Western Women's Club on November 17, at which time we will have as guest speaker, Dr. Ray Lyman Wilbur. The December 8 meeting, also to be held at the Western Women's Club, will have as its speaker Mrs. A. C. Reed, who will give a book review on "My Great Wide Beautiful World" by Juanita Harrison.

At present the round-table discussions, held on every Wednesday morning at the County Medical Society building, are claiming the interest of the members.

Santa Barbara County

The Woman's Auxiliary to the Santa Barbara County Medical Society has been bending all its energies this fall to the plans for a Health Institute, to be held on October 23 and 24. At each meeting, plans have been discussed and suggestions made and committees appointed. Mrs. Richard McGovney is general chairman for Arrangements; Mrs. John Van Paing, chairman of Exhibits; Mrs. Charles S. Stevens, chairman of Hostesses; Mrs. Horace Pierce, Decorations; Mrs. H. E. Henderson, Publicity. Mrs. Edward Markthaler and Mrs. Frank Hombach have given especial assistance to Mrs. McGovney in personal contacts with coöperating agencies and financial arrangements.

On September 4 the president, Mrs. William R. Hunt, entertained the members of the Board at luncheon at her home, when plans for the year's work were made. The first regular meeting of the year was at the home of Mrs. Richard McGovney, following a barbecue luncheon. It was decided to hold the monthly business meetings on the first Wednesday morning of the month at the Public Library, after which those members who so desire may attend the luncheon meeting of the Health Section of the County Council of Social Agencies. In this way duplication of programs will be avoided.

A pleasant social function was the dinner in Santa Maria on October 12, at which the doctors' wives from Santa Barbara met several from Santa Maria and several from San Luis Obispo County. The occasion was a joint meeting of the Santa Barbara and San Luis Obispo County Medical Societies at the Santa Maria Club, their wives dining at the Santa Maria Inn. No formal meeting was held, but the ladies from the North were told of the activities of the Santa Barbara doctors' wives, with whom they have not heretofore joined.

This meeting followed the regular October monthly business meeting on Wednesday, the 7th, at the Public Library at 10 a. m. The business centered around plans for the Health Institute, which were outlined by the chairman, Mrs. Richard McGovney.

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The regular monthly business meeting of the Santa Barbara Auxiliary was held in the Board Room of the Public Library at 10:30 o'clock, November 4, nine members being present. Reports were given of the Health Institute, which was held on October 24 and 25. They showed a balance of about $50 of receipts over disbursements, and it was agreed to put this into a special fund to start the next Health Institute with. Letters of thanks have been written to all agencies and persons coöperating, and suggestions were made for improvements to be made another year. Plans were announced for the membership tea, to be given by one of our members at her home on November 20, to which the wives of all doctors and internes in the county will be invited. Invitations are to be mailed to all, and then all are to be called on the telephone in order that members may take nonmembers to the tea in their cars.

Eight members took part in the Red Cross membership drive on November 12. The president, Mrs. William R. Hunt, entertained at tea on November 5 all Health chairmen in the Parent-Teacher Association Council, when she impressed on them the importance of each school taking a subscription to *Hygeia,* and also the importance of at least one Health program in each Parent-Teacher Association every year. The superintendent of schools and the school physician are coöperating in the *Hygeia* campaign. Our president is Health chairman for the Parent-Teacher Association Council in Santa Barbara.

Elisabetta P. Henderson, *Publicity Chairman.*

Santa Clara County

The Board of Directors met previous to the regular meeting, to pay bills; elect a new corresponding secretary; fill a vacancy on the Board—one member resigning; and hear the report of the chairman of the Auditing Committee.

The regular meeting was a luncheon held at the San Jose Country Club, forty-two members being present.

After routine business was disposed of, Mrs. Shepherd gave a report of the State Board meeting held in Santa Monica in September.

The guest speaker for the day was Mrs. William P. Butler, who spoke on *Impressions of Modern Medical Literature.*

* * *

Report of the regular meeting of the Woman's Auxiliary to the Santa Clara County Medical Association.

The meeting was an informal musicale and tea held at the St. Claire Hotel on November 2. Forty members were present.

Routine business was disposed of and at which time it was voted to sponsor a tea in honor of the Santa Clara County Nurses' Association, November 25.

A half-hour of informal music was presented by a trio of young people, after which tea was served.

Mrs. Daniel Bilker, *Secretary.*

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Atlantic City, New Jersey, June 7-11, 1937. Olin West, M. D., 535 North Dearborn Street, Chicago, secretary.

California Medical Association, Del Monte, May 2-5, 1937. F. C. Warnshuis, M. D., 450 Sutter Street, San Francisco, secretary.

* * *

Western Surgical Association, Kansas City, Missouri, December 11-12. A. H. Montgomery, M. D., 122 South Michigan Boulevard, Chicago, secretary.

Medical Broadcasts*

American Medical Association

The American Medical Association and the National Broadcasting Company are presenting the second series of dramatized health broadcasts, under the title "Your Health." The first broadcast in the new series, the thirty-second dramatized coöperative broadcast under the title "Your Health," was given October 13. The theme for 1936-1937 differs slightly from the topic in the first series, which was "Medical Emergencies and How They Are Met." The new series is built around the central idea that "one hundred thousand American physicians in great cities and tiny villages, who are members of the American Medical Association and of county and state medical societies, stand ready, day and night, to serve the American people in sickness and in health."

The program will be on the Blue network instead of the Red, as originally announced.

The topics are announced monthly in advance in *Hygeia,* the health magazine, and three weeks in advance in each issue of the *Journal of the American Medical Association.*

The time of the broadcast is Tuesday afternoon, two o'clock, Pacific time.

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San Francisco County Medical Society

A radio broadcast program for the San Francisco County Medical Society for the month of December is as follows:

Tuesday, December 1—KYA, 6 p. m.
Tuesday, December 8—KYA, 6 p. m.
Tuesday, December 15—KYA, 6 p. m.
Tuesday, December 22—KYA, 6 p. m.
Tuesday, December 29—KYA, 6 p. m.

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Los Angeles County Medical Association

The radio broadcast program for the Los Angeles County Medical Association for the month of December is as follows:

Tuesday, December 1—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, December 5—KFI, 9 a. m. Subject: The Road of Health.
Saturday, December 5—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, December 8—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, December 12—KFI, 9 a. m. Subject: The Road of Health.
Saturday, December 12—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, December 15—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, December 19—KFI, 9 a. m. Subject: The Road of Health.
Saturday, December 19—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, December 22—KECA, 10:30 a. m. Subject: The Road of Health.
Saturday, December 26—KFI, 9 a. m. Subject: The Road of Health.
Saturday, December 26—KFAC, 10:15 a. m. Subject: Your Doctor and You.
Tuesday, December 29—KECA, 10:30 a. m. Subject: The Road of Health.

The San Francisco Medical History Seminar.—On November 18, 1936, the San Francisco Medical History Seminar gave a luncheon in honor of Dr. Maude E. Abbott, Curator of the Medical Museum at McGill University, Montreal. Doctor Abbott, who has made many important contributions to the history of medicine and nursing, addressed the Seminar on "The Young Osler."

Five States Receive Over Six Million Dollars in Social Security Funds. — The Federal Social Security Board, under date of October 28, announces: Federal grants totaling $6,824,239.30 to Alabama, California, Massachusetts, South Dakota, and New Jersey for assistance to the needy aged, the blind, and to dependent children were announced by the Social Security Board recently.

The states receiving funds, the amounts granted, and the number of persons who, it is estimated, will be helped are shown in the following table:

State	Aid to	Federal Grant	Estimated Number of Persons to Receive Aid
Alabama	Aged	$ 241,412.59	12,000
	Children	71,735.73	17,500
California	Aged	3,858,435.00	53,900
	Blind	209,506.50	4,300
	Children	409,825.50	22,300
Massachusetts	Aged	1,740,945.24	27,800
	Blind	26,158.82	1,050
South Dakota	Aged	249,889.50	7,933
New Jersey	Blind	16,330.42	494
Total		$6,824,239.30	147,277

The grants-in-aid to Alabama, California, Massachusetts, and South Dakota present the federal share of the states' public-assistance expenditures for the current quarter, October 1 to December 31.

During October, it is estimated that 1,362,189 individuals—989,532 aged, 29,721 blind, and 342,936 dependent children—will be aided in the forty-three states now operating one or more plans under the federal-state public-assistance program. The Social Security Board has approved forty-two state plans for aid to the needy aged, twenty-six state plans for aid to the needy blind, and twenty-seven state plans for aid to dependent children in their own homes.

Under these plans, approximately half the cost of the states' aid to the aged and blind and one-third the cost of the states' aid to dependent children is paid by the Federal Government. Since February a total of $87,757,130.27 of federal funds has gone to coöperating states to aid them in financing their approved state programs for these three forms of assistance. Of this amount $78,162,444.78 was for the aged, $2,923,753.29 for the blind, and $6,670,932.20 for dependent children.

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* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to California and Western Medicine, 450 Sutter Street, San Francisco, for inclusion in this column.

Colorado State Medical Society.—The Executive Committee and the Advisory Board of the Colorado State Medical Society jointly have fixed July 19, 20, and 21, 1937, as the dates for the Rocky Mountain Medical Conference.

The Rocky Mountain Medical Conference is to be a joint meeting of the Colorado State Medical Society, the New Mexico Medical Society, the Utah State Medical Association, and the Wyoming State Medical Society, to which members of the recognized societies of adjoining states will also be invited.

California Department of Industrial Relations.—The last report to the Governor's Council contained the following item:

Division of Immigration and Housing.—During the month of August, 66 labor camps were inspected; 15 camps were listed as good, 26 fair, and 25 bad. Of the total number of camps inspected, 54 were old camps and 12 new ones. In the camps inspected it was found that 2,302 occupants were American-born, while 748 were foreign-born, making a total of 3,050, of which 1,567 were men, 766 women, and 717 children.

During the month 44 automobile camps were inspected; 26 were listed as good, 11 fair, 4 bad, and 3 closed. Ten housing inspections were made.

A considerable portion of the month was taken up with matters having to do with proposed changes to the State Housing Law. This work has necessitated much careful study and thought, not only to the proposed changes themselves, but to the planning of a campaign designed to bring about their adoption in the Legislature without any major opposition. This has meant much correspondence and the holding of many conferences with individuals and groups who are favorable to our work. The proposals are now ready for mimeographing and will be distributed shortly for criticism. The main features have been discussed with the Attorney-General's office and received verbal approval.

Lactic Acid From Whey.—Lactic acid, a chemical used largely in the leather and textile industries, was first identified 150 years ago in sour milk and has been made in the United States for fifty-five years or more, but surprisingly it has never been made commercially from milk until within the last year.

Recently, at the Dairy Industries Exposition at Atlantic City, New Jersey, scientists of the United States Bureau of Dairy Industry demonstrated methods they have developed for making lactic acid and related chemicals from whey.

Whey, a byproduct from cheese and casein manufacture, has been considered for years one of the greatest sources of trouble and waste in the dairy industry. Dairy scientists have long felt there were great possibilities for a new industry within the dairy industry, based on fermenting the milk sugar contained in the whey. A few years ago the Bureau developed the fundamental information for making lactic acid commercially, and has since made further refinements in its process. Last year a large dairy organization handling enormous quantities of surplus milk began making lactic acid and calcium lactate from whey on a commercial scale. The whey in this case is a byproduct from the manufacture of casein from skim milk.

Materials most commonly used for the production of lactic acid at present are molasses, cornstarch, and other sources of fermentable sugar. Lactic acid not only has many uses itself, but it is the material from which other chemicals may be made. Its chief use perhaps is in the leather industry, where its function is to neutralize the lime used in removing the hair from hides. It also is used in the textile industry, in baking, in hardening pickles, in medicinal preparations, and in beverages sold at soda fountains. Some of the chemicals made from lactic acid are useful in making lacquers.

Recently, the Bureau scientists have shown how lactic acid may be concentrated to a greater degree than it is at present. Instead of an acid containing from 50 to 75 per cent water, plus some impurities, producers are now enabled to make an acid containing no water and fewer impurities. This applies to lactic acid made from the usual materials as well as to that made from whey.

Medical Stamp Exhibit.—A special exhibit of postage stamps relating to medicine has been arranged in the University of California Medical School Library. It includes some seventy-five items, mostly from the collection of Dr. K. F. Meyer, Director of the Hooper Foundation for Medical Research, who is an ardent philatelist. Many countries have issued stamps commemorating medical events or physicians of prominence. Nearly all of these are on view in the exhibit. It is believed that this exhibit is the first of its kind to be assembled.

Southern California Medical Association.—The ninety-fifth semiannual meeting was held Friday and Saturday, October 30 and 31, at the permanent quarters building of the Los Angeles County Medical Association, 1925 Wilshire Boulevard, Los Angeles.

The program follows:

October 30—Friday Afternoon Session

Immediate Repair of Divided Nerves and Tendons of the Hand—J. Edwin Kirkpatrick, M. D., Los Angeles.
Discussion by Paul E. McMaster, M. D., Los Angeles; Hugh Toland Jones, M. D., Los Angeles.

Normal Hematologic Standards with Discussion of Variations Due to Physiologic Changes—A. G. Foord, M. D., Pasadena.
Discussion by W. M. Butt, M. D., Los Angeles; J. W. Budd, M. D., Los Angeles.

What May We Expect From the Treatment of Tumors of the Bladder—H. C. Bumpus, Jr., M. D., Pasadena.
Discussion by J. J. Crane, M. D., Los Angeles; A. J. Scholl, M. D., Los Angeles.

Proctology in General Medicine—C. N. Taylor, M. D., Los Angeles.
Discussion by A. J. Murietta, M. D., Los Angeles; W. H. Kiger, M. D., Los Angeles.

Friday Evening Session

Protamine Insulin and the New Era in Diabetes—Elliott P. Joslin, B. A., Ph. B., M. A., M. D., F. A. C. P., Clinical Professor of Medicine, Harvard Medical School.

October 31—Saturday Morning Session

Medical Aspects of the Business Cycle—Emil Bogen, M. D., Olive View.
Discussion by Phoebus Berman, M. D., Los Angeles; Reginald Smart, M. D., Los Angeles.

Results of Surgical Treatment of Hyperparathyroidism—Isaac Y. Olch, M. D., Los Angeles.
Discussion by C. J. Baumgartner, M. D., Los Angeles; C. S. Sturgeon, M. D., Los Angeles.

Anemia as a Cause of Angina Pectoris—Francis M. Smith, M. D., La Jolla.
Discussion by Franklin R. Nuzum, M. D., Santa Barbara; J. F. Anderson, M. D., Los Angeles.

General and Neurosurgical Consideration of the Cerebral Birth Palsies—Hans V. Briesen, M. D., Los Angeles.
Discussion by George H. Patterson, M. D., Los Angeles; John C. Wilson, M. D., Los Angeles.

Saturday Afternoon Session

Gastroscopy as an Aid in the Diagnosis of Malignant Lesions of the Stomach—John P. Renshaw, M. D., Los Angeles.
Discussion by Roland Cummings, M. D., Los Angeles; John C. Ruddock, M. D., Los Angeles.

Cesarean Sections in Los Angeles County—William Benbow Thompson, M. D., Los Angeles.
Discussion by H. K. Marshall, M. D., Glendale; Lyle C. McNeile, M. D., Los Angeles .

Allergic Study of Feather Protein—George Piness, M. D., Los Angeles.
Discussion by P. A. Gray, M. D., Santa Barbara; Robert W. Lamson, M. D., Los Angeles.

The Relationship of Low Basal Metabolic Rates to Allergic Diseases—Merrill W. Hollingsworth, M. D., Santa Ana; John Montanus, M. D., Santa Ana.
Discussion by Hyman Miller, M. D., Los Angeles; Francis Pottenger, Jr., Monrovia.

New Welfare Set-Up to Head All Relief Is Asked for State.—The creation of a State Department of Public Welfare to administer all phases of indigent, veterans, unemployment and transient relief, assistance to the aged and the blind and aid to dependent children, is suggested in a survey of welfare conditions in the State just completed by the Bureau of Public Administration of the University of California. The details of the survey, which covered several years' time, is included in a volume "Welfare Activities of Federal, State and Local Governments in California, 1850-1934." The survey was made by Frances Cahn, research associate, and Valeska Bary, former research associate in the Bureau, and is a complete record of public welfare work in the State from the coming of the Argonauts to the present day.

The new department is needed to obviate the present "lack of coördination of activities and a resultant duplication of effort and increased expenditures" occasioned by the present various state and county set-ups for relief and other aid. The present Department of Social Welfare, Department of Institutions, and Department of Military and Veterans' Affairs are held to ramify into each other to some extent. The survey points out that there is also need for the Department of Social Welfare and the different counties to establish comparable relief standards, policies, and methods.

The new department should likewise be given the right to license and supervise all private institutions for the aged and the mentally disordered, and should be given supervision of all county hospitals and almshouses, the survey states. It should also be given the supervision of all public and private child welfare activities, such as boarding homes, institutions, day nurseries and child-placing agencies and the supervision of adoptions, juvenile probation and parole and the operation of State correctional schools. While it would grant the counties autonomy in the administration of their welfare activities, it is suggested that such activities be made to conform to the minimum requirements set up by the new department, and by federal relief standards.

Population in the United States to Reach Peak in 1950 and Then Decline.—A declining national population is inevitable within fifteen years unless the birth rate should rise or immigration increase, according to Dr. O. E. Baker of the Bureau of Agricultural Economics.

"The birth rate has declined more than 25 per cent during the last ten years. If the birth rate continues to decline at this rate," Doctor Baker says, "a maximum population will be reached by 1945 or 1950. Thereafter, the population will decline; declining slowly at first, then at an accelerating rate."

A declining national population, with rural surplus and urban deficit in births, will have serious economic and social consequences in Doctor Baker's opinion.

These consequences will develop slowly and silently, he predicts, adding that it probably will be twenty-five years before many people will realize what is taking place.

"Fifty years from now," Doctor Baker says, "there may be only a third as many children in the nation as now, and only half as many women of child-bearing age. There will be nearly three times as many old people. Many unemployed urban people will seek shelter and sustenance with relatives and friends on farms. Many of these people will start little farms, and never again return to the cities to reside.

"Millions of farm youth will migrate to the cities, many of these migrants will inherit farms, or, through the settlement of estates, acquire mortgages on farms. Wealth—represented by the ownership of land or the income from it—will be transferred to the cities."

Doctor Baker says that other millions of farm youth will begin farming, mostly on farms vacated by the death of aged farmers. Unless these farms are acquired by inheritance, he declares, there will be an increasing number of tenants.

But there is a way to retard these ominous developments, in the opinion of this economist. "They can be retarded," he says, "by a rapid decentralization of population, industry, and commerce, by the spread of part-time farming, and by an appreciation by the middle and upper classes of their responsibility for the reproduction of the race and the welfare of the nation."

The History of Science Dinner Club of Berkeley.—Dr. Herbert Evans, who organized the very stimulating History of Science Dinner Club in Berkeley, has arranged a program for this winter which carries along the general theme of last year's discussion. Special emphasis was placed last year on the relations of science and philosophy in the eighteenth and early nineteenth centuries. This year the latter part of the nineteenth century will be included. A consistently pleasing feature of the meetings has been an informal display of rare and interesting scientific literature.

Neutron Radiation Proves Effective on Mouse Sarcoma.—Joint experiments conducted by the Yale University Department of Internal Medicine and the University of California have determined that neutron radiation is four times as effective as the x-ray in the experimental destruction of mouse sarcoma 180, a cancerous-like growth, but that much remains to be developed regarding the action of such radiation on the healthy tissue.

The experiments were conducted for the University of California by Professor Ernest O. Lawrence, director, and Paul C. Aebersold, assistant in the Radiation Laboratory of the University of California, and Dr. John H. Lawrence of the Department of Internal Medicine, Yale University.

"It was the primary purpose of this investigation to determine relative doses of both neutron rays and x-rays required to kill mouse sarcoma 180," the statement covering the experiments declares. "In other words, these experiments were concerned with dosage ratios rather than absolute values. It was a question only of comparing the radio sensitivity of the tumor with that of the healthy mouse for the two kinds of radiation.

"It was generally noted that with the higher doses of neutron the tumors grew less rapidly when compared with tumors irradiated with equivalent doses of x-rays. Thus, from the results it appears that neutrons produce the same lethal effect with one-quarter the x-ray dose. The experiments do not allow us to arrive at any broad conclusions."

The sarcoma group of tumors are held to be equally as malignant and as destructive as the cancer or carcinoma group, but still lack the generic designation, such as cancer. The outcome of the experiment, while indefinite, prompted the statement by its authors that "if further studies on this tumor and other animal tumors bear out present indications, then we have here a new form of radiation which may have important clinical applications."

The experiments were made possible by the support of the Joseph Macy, Jr., Foundation, the Research Corporation, and the Chemical Foundation of America. The findings were submitted to the National Academy of Sciences and published by that organization.

What They Do.—Each year, from Thanksgiving to Christmas, Americans from Maine to Hawaii and from Alaska to Florida unite with the people of forty-one other countries in one of the most powerful mass movements against a common foe that the world has ever known—tuberculosis.

Voluntarily they participate in the annual sale of Christmas Seals, those gay holiday stickers on which appears that international symbol of health and hope—the double-barred cross. This year the United States Seals also bear the picture of jovial good health personified, Santa Claus.

Christmas Seals, since 1907 when the first one was sold in Wilmington, Delaware, have raised funds—penny by penny and dollar by dollar—that have helped to build a line of defense that protects all of us.

That the defenses are effective is shown clearly by the fact that the tuberculosis death rate has been forced down from 179 deaths per 100,000 population in 1907 to fifty-four in 1935.

Against the unnecessary toll taken by this communicable, preventable and curable disease, the comparatively small sums of money raised in local communities by voluntary groups have been used in those communities with a definite plan, under the guidance of the National Tuberculosis Association.

These funds have promoted the establishment of agencies of various kinds that have in turn been chiefly instrumental in gradually bringing tuberculosis under control. These lines of defense may be catalogued briefly thus:

1. Twelve hundred institutions—sanatoria for tuberculosis and hospitals having tuberculosis departments—providing 95,000 beds for the treatment and prevention of tuberculosis, chiefly for adults.
2. Ten thousand public health nurses engaged in tuberculosis work.
3. One thousand clinics for diagnosing and finding tuberculosis.
4. More than 1,200 preventoria, summer camps, open-air schools and similar institutions for the care and treatment of children with various forms of tuberculosis or for those who have been in contact with tuberculosis, or who are subnormal physically.
5. One thousand nine hundred and eighty-one tuberculosis associations, including a state-wide organization in every state and local agencies in all of the larger population centers.

But the building of our national defense against tuberculosis is not completed. The disease still takes the lives of about 70,000 persons annually in the United States. Tuberculosis, although ranking seventh as a cause of death when all ages are considered, is the leading killer of people between 15 and 45. It remains the breaker of homes, the maker of orphans, and a constant threat to the life and happiness of everyone.

Hotis Test Is New Weapon Against Dairy Cow Disease.—A new test which promises to be a useful means of detecting mastitis, a troublesome and costly disease of dairy cattle, has been developed by research workers of the United States Department of Agriculture. The new method is known as the "Hotis test," named after its originator, R. P. Hotis of the Bureau of Dairy Industry, who died soon after conducting most of the experimental work.

Although the method has been applied only on a limited basis thus far, Department officials plan to give it practical field tests to determine its adaptability under various conditions, for the diagnosis of mastitis in dairy herds. A simple accurate test for the detecton of this disease in its early and latent stages has long been sought.

Mastitis, especially in dairy cows, has been a problem for many years. It is a disease of the milk glands which often results in abnormal milk and changes in the udder tissue in the animals infected. Large numbers of cows have been slaughtered because their udders have been so badly damaged as to make them unfit for milk production. The trained veterinarian or inspector can often detect this disease by clinical symptoms that are apparent to the eye, or by careful examination with the hands. But there are certain early and latent stages in which the udder may be infected with the causative organisms, and yet a definite diagnosis may be difficult or impossible under usual methods.

A number of laboratory tests have been used to indicate such abnormal milk. Such tests include the direct microscopic examination, leukocyte count, chlorid test, brom-thymol-blue test, catalase test, and bacteriologic culture methods on certain differential media. Usually two or more of these tests have been used together, as one test may show a reaction where others fail.

The new test brought out by the Bureau of Dairy Industry is believed to be more accurate than any other heretofore used. In addition, it is comparatively simple and requires little equipment, thus allowing the handling of a large number of samples at one time.

By the use of this test it appears that incipient or latent infections with the mastitis streptococcus may be quickly detected. This will allow segregation of the infected animals and permit prompt methods to prevent spreading. Infected cows should be milked last, and the milker should rinse his hands in a chlorin solution after milking each cow. If milking machines are used, the teat cups should be rinsed thoroughly with water, then with a chlorin solution, before they are placed on the next animal.

LETTERS

Concerning automobile injuries.

Westways*

November 2, 1936.

To the Editor:—I thank you for sending me the copy of California and Western Medicine.

I think I need not tell you that none is more aware of the deplorable accident situation in the United States today than the Automobile Club of Southern California. We have studied the problem for many years and have considered it from every possible angle. The point of view that there are entirely too many incompetent drivers operating motor vehicles today is probably the most generally accepted reason for the high casualty rate. How to eliminate these unfits is a problem that, from its practical aspects, is a most difficult one.

The existing law requiring physical examinations has many glaring defects. Were it to be rigidly and impartially enforced it would still fall far short of proving a noteworthy correctional measure. This is because of the fact that it makes no provision for testing the psychological as opposed to the physiological qualifications of the driver. There are many of us who believe that the mentally unfit (temporarily or otherwise) are probably responsible for more accidents than the physically unfit. In the class of the mentally unfit will be found the "repeater," who is the cause of accident after accident. He may be of the emotionally unbalanced type, a victim of delusions or a sufferer from any one of many neurological ailments which prevent rapid reactions in times of emergency. The present law doesn't touch this type of individual, and yet we all know that he is a distinct menace to himself and to his fellow motorists. When we have devised a means for determining those who are congenitally disposed toward accidents and can take them out from behind the wheels of motor vehicles, we shall have gone a long way toward solving the accident problem.

I noted with interest your relative figures as to the geographical accident localities. Without being captious I think the per capita method of rating accidents is hardly fair. We have practically abandoned it, for we feel that gasoline consumption is a more equitable gauge for measuring the relative hazards in various areas. And there is considerable difference between two scales of measurement. On the basis of gasoline consumption, for instance, we find that the national average death rate in 1935 was 22.8 deaths per 10,000,000 gallons of gasoline consumed. The lowest rate prevailed in Rhode Island, where it dropped to 10.2; the highest in Georgia, where it reached 35.4. By this basis of calculation the California figure was 20.9—not an enviable record by any manner of means, but yet somewhat below the national average. Unfortunately we do not have these figures for various cities. It would be interesting to compare them with the per capita death rate.

Again I want to thank you for sending me your publication, which has proven of great interest to me.

Very sincerely yours,

Phil Townsend Hanna,
Editor and General Manager.

Concerning legal jurisdiction of district coroners.

State of California
legal department

San Francisco, October 23, 1936.

Honorable Walter M. Dickie,
Director of Public Health,
313 State Building,
San Francisco.

Dear Sir:—In your communication of September 17, 1936, you state that a seaman died aboard the steamer *S. C. T. Dodd* as it was being untied from a pontoon wharf at Estero Bay, San Luis Obispo County, California.

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* Owned and published monthly by the Automobile Club of Southern California.

According to your statement a physician of that county pronounced the man dead without evidence of external violence.

The boat proceeded to Richmond, and the coroner of Contra Costa County was notified the body of the deceased was aboard the ship. The remains were taken in charge by the coroner and, after inquest, a verdict as follows was returned:

> Coronary occlusion, and we further find no censure due the captain of said boat in bringing the body to Richmond dock, owing to the difficulties attendant on removing body to shore at Estero Bay, California.

A death certificate was issued in Contra Costa County, a copy kept in the Richmond Health Office, and the original filed in your Bureau of Vital Statistics in Sacramento.

The remains were taken in charge by the authorized representative of the Sailors' Union in San Francisco and are no longer available for autopsy by the coroner of San Luis Obispo County, if, indeed, it was under the circumstances his duty to conduct an autopsy and issue a certificate of death upon the seaman, who did in fact die in his county.

You state that similar situations frequently occur in San Francisco Bay, where a boat at the exact time of death is in one county, but proceeds to dock in another, and ask the following three questions:

> First: Should the certificate filed by the coroner of Contra Costa County be permitted to stand alone on our official record?
>
> Second: Has the coroner of San Luis Obispo County jurisdiction to issue a death certificate from his county? In this connection, I would state that the body is not available for autopsy by such coroner.
>
> Third: Should a certificate of death be issued by the coroner of San Luis Obispo County, and should it be attached to the certificate of death already filed from Contra Costa County. It occurs to me that the answer to this question is extremely important to the State due to the geographical contour of California.

In reply, I would first agree that the geographical contour of California should be considered in reaching a conclusion as to the questions asked by you.

Waters three miles seaward are within the boundaries of this State (*Ocean Industries* vs. *Superior Court,* 200 Cal. 235). A death might occur at many points within this limit where it would be impossible to land a vessel and permit a body to be taken to the county seat of the county in which the man actually died, nor would the law demand that a vessel postpone a voyage for the purpose of permitting a local autopsy.

In the matter under consideration it definitely appears that though a physician of San Luis Obispo County was able to board the ship at the pontoon wharf at Estero Bay, there were difficulties attendant upon removing the body to shore.

Under such circumstances we conclude it was the duty of the coroner of Contra Costa County to take possession of the deceased's body within the purview of Section 5 of the Vital Statistics Act, Chapter 378, Statutes of California, 1915. Certainly, as far as he was concerned the death occurred in this State and the body was found in his county.

The matter is somewhat akin to that discussed in *Huntly* vs. *Zurich etc. Co.,* 100 Cal. App. 201, at 214, where the Court said:

> The evidence offered by plaintiff shows that no inquest was held in Los Angeles County. The performance of an autopsy was not the holding of an inquest. It also shows that upon the arrival of the body in San Francisco plaintiff was dissatisfied with the findings of the autopsy surgeon in Los Angeles; that she represented that her husband's death was sudden; that he had had a "terrible fall." She further expressed the idea that his death had been occasioned by violence of some sort and was not the result of natural causes. Under the circumstances, the body being within the city and county of San Francisco, and within the jurisdiction of the defendant, Leland, and he having been informed that no inquest had been held in the county of Los Angeles, and there being a question as to the cause of death as expressed by the plaintiff, the coroner acted within his authority in ordering an inquest held, and in authorizing his autopsy surgeon to proceed in the usual manner.
>
> The decision of the question as to whether an inquest is necessary rests in the sound discretion of the coroner, and there is nothing in the record to counteract the presumption that he regularly performed his duty as coroner. . . .

Your first question is answered in the affirmative and your second and third in the negative.

The law does not demand the impossible. As the coroner of San Luis Obispo County did not have possession of the body and could not get the same, it was properly examined and disposed of in Contra Costa County. The coroner of the first-named county cannot possibly add further to the information already on file in the Bureau of Vital Statistics.

Very truly yours,
U. S. Webb, *Attorney-General.*
By Lionel Browne, *Deputy.*

SPECIAL ARTICLES

MEDICAL JURISPRUDENCE*

By Hartley F. Peart, Esq.
San Francisco

Malpractice Liability of Physicians Employed in State, County, or Other Publicly Owned Hospitals: Absence of Liability of State, County, or Other Governmental Agency.

On November, 4, 1936, the Attorney-General of the State of California rendered the following significant opinion to Colonel Nelson M. Holderman, Commandant of the Veterans' Home of California:

> Dear Sir:—I have before me your communication under date of October 20, 1936, which is as follows:
>
> "I have been instructed by the Board of Directors of the Veterans' Home of California to direct you a communication requesting an opinion as to whether or not any suit of malpractice or damages could be brought against our surgeon or assistant surgeons by any dissatisfied member of the Home."
>
> I am aware of no reason why a surgeon or assistant surgeon at the Veterans' Home of California should not be subject to suit for malpractice or damages by a dissatisfied member of the Home, or by any other person.
>
> Whether or not a judgment could be secured against such surgeon or assistant surgeon in any such action would, of course, depend upon the facts in the particular case.
>
> Assuming that the basis of the inquiry which you present upon behalf of the Board of Directors of the Home is for the purpose of ascertaining whether or not there is any exemption from suit extended to such surgeon or assistant surgeon, your question should be answered in the negative.

The Attorney-General's opinion suggests the important question: What is the liability of a physician employed in a county hospital, state hospital, asylum or home, or in a municipally owned hospital for negligence (*i. e.,* malpractice)? It also raises another question: If a physician employed in a state, county or municipally owned hospital is negligent in his treatment of a patient therein, is the governmental agency that owns the hospital liable to a civil action for damages brought by the patient?

The Attorney-General's opinion reaches the conclusion that a physician employed in a state-owned institution is legally responsible for malpractice with respect to any patient therein to whom he may negligently render professional services. In other words, a physician employed by a governmental agency to render professional services to patients furnished by the governmental agency is just as liable to be sued for malpractice as a physician who is engaging in private practice and renders professional services to his own private patients. The Attorney-General's opinion is in accord with the general law on this subject. In Volume 21 of California Jurisprudence at page 908, we find the following statement of the law:

> It is elementary that a public officer is liable to respond in damages to one specially injured by his negligence or

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*Editor's Note.—This department of California and Western Medicine, containing copy submitted by Hartley F. Peart, Esp., has been established by the California Medical Association Council. Each issue will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession. These will be compiled by Mr. Hartley F. Peart, General Counsel of the Association.

refusal to perform, or by his negligent performance of an official ministerial duty to the extent of such special injury, regardless of intentions, whether good or bad.

Generally speaking, physicians who render professional services on behalf of the State or a county or municipality are considered to be "public officers." Also, generally speaking, this is so even though the professional services are rendered gratuitously.

One would suppose that since the employee, that is to say, the physician, is liable for malpractice, that his employer, in this case the state or a county or city, would also be liable to respond in damages to the injured patient. Curiously enough, however, in those cases in which the question of the Government's liability has been considered, the courts have held that neither a state, county nor city is liable for the malpractice of a physician employed by such state, county or city. In *Sherbourne* v. *Yuba County*, 23 Cal. 113, an attempt was made to hold a county liable to one who, while an inmate of a county hospital, suffered injuries from unskillful treatment by the resident physician. It was held, however, that a county is not liable for acts of officers or employees which it appoints in exercise of a portion of the sovereign power of the State by the requirement of a public law simply for the public benefit and from which the county as a corporation derives no pecuniary gain. Again in *Davie* v. *Regents of the University of California*, 66 Cal. App. 689, it was held that the regents were not liable for the malpractice of an attending physician at the University Infirmary, following the rule of the *Sherbourne case*. The court concluded its opinion with a statement that although it was unfortunate, nevertheless the injured plaintiff must be left to his remedy against the attending physician for malpractice.

There are cases in which it is suggested that the immunity from suit for malpractice of the state, a county or city, would not exist if the injury resulted from an activity upon the part of the governmental agency in a proprietary, as distinguished from a governmental, capacity. However, there are no cases in which it has been held that the operation of a state hospital or institution or county hospital or municipal hospital or clinic is a proprietary function, and it seems very doubtful that such a case will ever occur, inasmuch as the protection of health is within the police powers of all governments and as such is a governmental function.

If the malpractice burden which now is borne by those physicians in governmental employment is to be shared by the state, counties or cities, or is to be shifted from the physicians to their employers, it must be accomplished by legislative action. It is interesting to note that the California Legislature has provided, with respect to county roads and highways, that liability for the negligence of county road workers shall be upon the county. No good reason occurs to the writer why the Legislature should not also provide the same rule for physicians.

THE BIRTH CONTROL INDUSTRY

An article by Harrison Reeves in the *American Mercury* states:

> The fact that one of America's fastest-growing and most prosperous businesses is conducted brazenly in the face of a thousand laws which specifically forbid its existence, is a paradox that is generally overlooked in the public's scramble to acquire some of that selfsame industry's valuable products. It is not so vast, say, as the petroleum business, because we spend more time riding aimlessly about in motor cars than we do stopping to make love; nor can it be compared in total volume of sales with the cosmetics trade with which it is in several ways allied. It is more notorious than some of America's widely advertised commercial combines because it thrives on free, or word-of-mouth, publicity; moreover, it boasts of widespread intellectual approval and millions of satisfied users. Its cash sales run into hundreds of millions of dollars annually, and its potential profits approach the billion-dollar mark. And yet, as noted above, the private sale of birth-control devices is strictly a bootleg business, prohibited everywhere, including Russia, by the most intricate laws ever devised by the legalistic mind of man.
>
> Strangely enough, little progress has been made in securing the repeal of these laws, and it is likely that less and less effort will be expended in coming years. For the problem can be solved in simpler fashion; and that is by treating the laws as though they did not exist. This is the current procedure in America as well as in the rest of the civilized world, the populace having been sold on the idea that the best way to combat tyranny is, first, to defy it, and then apply force. In the instance of birth control, the force applied is the simple one of large commercial profits. There is a vast amount of money in the business, and it has attracted indubitable talent. These modern entrepreneurs have come to believe, and with reason, that the industry will soon be commonplace and honorable, and that the old taboos will disappear in the same manner as did those once exercised against witches in the puritanical purlieus of Salem, Massachusetts.
>
> From the strictly industrial point of view, the total dollar volume of the birth-control medication and device business in America now approximates $300,000,000 a year. Yet this retail total, fancy as it may seem, does not include the profits derived from the sales of condoms (classically mispronounced term in a republic that knows not of Sir Richard Condom of George III's reign) which are estimated by informed rubber manufacturers at $275,000,000 annually for the 5,000,000 articles manufactured and sold *daily*. The $300,000,000 is spent for jellies, chemicals, pessaries, suppositories, caps, rings, and compounded prescriptions from birth-control textbooks. . . .
>
> The trade, to use a euphonious term, is divided between nine large and some two hundred small manufacturers. No one of the nine leading concerns, of course, can boast anything like the gross sales of the leading condom entrepreneur, whose annual report discloses that he makes and sells 144,000 daily at three for one dollar, representing a total of some 50,000,000 articles retailed each year for, say, $17,000,000. Yet even though he undertakes no advertising or promotional work, his profits are smaller in proportion than those of the jelly manufacturers, and so the scales are kept balanced. . . .
>
> The known, catalogued, and credit-worthy distributing agencies for the trade number about 125,000, comprising the so-called "daily outlet" list of steady customers. These include 64,000 independent drugstores, thirty-five chains of pharmacies with 7,000 shops, 40,000 cosmetic stores and beauty parlors, approximately 150 recognized free clinics for the dissemination of birth-control advice and devices, and several thousand assorted gasoline filling stations, found on every street and highway in the nation. The exact number of these latter dispensaries is still a matter of academic dispute between manufacturers, jobbers, and the oil company executives, who have given the matter deep and restrained study. . . .
>
> II
>
> There is no considerable difference between the various jellies and chemicals now on the market, organically or in degrees of efficiency, while the mechanical contraptions—condoms excepted—are all precisely the same, usually being manufactured by the large concerns for dozens of owners of trade names. Condoms, however, like tires, vary in strength, according to quality and price. In the statistics given here, such articles as douche bags, syringes, diaphragms, and spermotoxins are eliminated, because the prescription of any one by a physician, or their common-sense use without medical advice, may be dictated by conditions other than birth control proper. In fact, if the first two items named were included in the figures, the totals for the trade would be doubled at least. For it is irrefutably true that birth-control insurance is not bought for nothing.
>
> Of proper consideration, however, is the amount of money which might be saved by more widespread use of birth-control machinery. I refer to the nation's abortion bill. It is estimated by the best-informed actuaries—life insurance experts, hospital authorities, and surgeons at one billion dollars a year. Some say two billion. Prices run from $35, which is standard in the Manhattan slums where medical competition is unbelievably brisk, to $1,500 standard for the Gold Coast of Hollywood. The average bourgeois price in New York is $50 and in the smaller county seats, $100. This excepts, of course, the unscrupulous surgeons who charge whatever the traffic will bear or whatever the case can be scared into. . . .
>
> There is another actuarial figure, too, which bears great import for insurance men. It is the death rate created by these simple little operations. In the United States, where the art is not nearly so highly developed nor so well taught as in many other countries, there are annually 15,000 known deaths, verified by autopsy. There are probably an even greater number accepted by coroners as due to appendicitis (the appendicitis death rate is notoriously high among women of noncanonical age) in which the appendix may or may not have been taken out along with the fetus, just as a precautionary measure. . . .

THIRTY YEARS OF CHRISTMAS SEALS

By Elizabeth Cole

In 1907 the first Christmas Seal sale was launched in Delaware by Miss Emily P. Bissell. She raised $3,000 to use toward building a hospital for children ill with tuberculosis. Much has been accomplished since then, and here in brief form are several important links in the nation-wide chain of tuberculosis control that Christmas Seal funds have helped to build.

The National Tuberculosis Association was founded in 1904 by a group of distinguished tuberculosis specialists and interested laymen. Its aim was to study tuberculosis in all its forms and to disseminate knowledge on its causes, treatment, and prevention. From the first, then, the campaign to fight tuberculosis, at that time the leading cause of death, was educational. To stimulate the public in a desire to secure better health machinery was the object, and in only very few instances have Christmas Seal funds ever been used for relief work.

The sixth International Congress on Tuberculosis was held in Washington, D. C., in 1908. This meeting, at which world-famous scientists were present, gave impetus to the whole tuberculosis movement in our country. During the next ten years, tuberculosis associations were formed in practically every state and there are now 1,981 associations affiliated with the National Tuberculosis Association.

In the belief that better health protection for children would result in better health for all communities as a whole, attention was directed toward the establishment of such media as fresh-air schools, preventoria, and toward encouraging early training in the ways of health. Providence, Rhode Island, opened the first fresh-air school in 1908, and in 1909 the first tuberculosis preventorium was established for New York City children at Farmingdale, New Jersey. Other states followed suit, and today there are 173 institutions with provision for children who need preventorium care.

New York, as early as 1909, passed a state law authorizing the building of county tuberculosis hospitals. In 1913 an act in Washington authorized counties in that state to erect sanatoria for the care of its tuberculous and inspired other neighboring states in the Pacific Northwest to undertake organized tuberculosis work. Today there are almost two hundred county tuberculosis sanatoria, besides more than one thousand other federal, state, city, and privately owned institutions providing special care for tuberculosis patients.

A study of tuberculosis in rural areas made by Wisconsin in 1911 revealed that tuberculosis was as prevalent in the country as in the city. This was an unexpected discovery and awakened other states to the need for searching out tuberculosis in their more isolated districts. Michigan was among them and, following a state-wide survey, was first to use a new type of clinic. It was called the "traveling clinic." The itinerant clinics became popular in other states, and were the means of uncovering many cases of tuberculosis. At permanent tuberculosis dispensaries and clinics patients today not only are treated, but they are taught how to get well. These are functioning to the extent of about one thousand.

At Framingham, Massachusetts, a unique health demonstration was established in 1916 to show that, with the coöperation of physicians and citizens, it was possible to control tuberculosis. At the end of the seven-year demonstration the death rate had dropped to thirty-eight per 100,000 population from 121 during the predemonstration decade. Statistical data of untold value were assembled through this study, and the work carried on in Framingham has resulted in similar demonstrations in other communities.

The study of tuberculosis in industry has been another important link in the chain that Christmas Seals have helped to finance. In an effort to emphasize health as a factor in industry the Chicago Tuberculosis Institute in 1911 started a campaign to detect tuberculosis among industrial workers. Other studies on this subject include one in Vermont among granite cutters, completed in 1921. It was found that certain dusty trades are dangerous, and many measures have now been taken to protect these workers against tuberculosis. A recent contribution has been a study of death rates by occupation, to focus attention on the trades in which the tuberculosis hazard is greatest.

In order to carry out one of the aims of the National Tuberculosis Association, namely, the study of tuberculosis, in 1920 a Committee on Medical Research was organized. Because it was financially prohibitive to found a special laboratory for tuberculosis research, the committee organized and coördinated work of individuals and groups and enlisted the coöperation of various university laboratories with their highly trained personnel. These men and women are working diligently to add to our knowledge about the disease and hope that some day a specific cure may be discovered.

Social research, too, has been carried on, and the findings of various studies have helped to bring to light the relationship of such factors as age, sex, nationality, and occupation to tuberculosis.

In the spring of 1928 the first Early Diagnosis Campaign was held. This country-wide educational campaign, conducted each spring for nine years, has for its objective the detection of tuberculosis in its early forms. These campaigns have encouraged the use of the tuberculin test and the x-ray among school children, and have been instrumental in finding early cases of tuberculosis when treatment could be given in time to save many lives. In Massachusetts a ten-year program was started in 1924 by the State Department of Health for the detection of tuberculosis among school children, the most extensive project of this kind ever undertaken.

And after recovery—what? That is another problem tuberculosis associations are working on. In New York City, back in 1913, the first workshop for arrested cases of tuberculosis was opened. At the Altro Work Shop, men and women are successfully engaged in garment making. To prepare tuberculosis patients to return to work, many sanatoria conduct classes for study and well-rounded programs of rehabilitation have been worked out in many parts of the country.

Utopia may be a long way off, but Dr. Thomas Parran, Jr., Surgeon-General of the United States, recently said, "Tuberculosis *can* be wiped out in our nation."

Why not work optimistically toward that goal? In 1907, when the first Christmas Seals were sold, 179 persons out of every 100,000 population were dying from tuberculosis; now less than 60 per 100,000 are dying. Certainly the links in the nation-wide chain of tuberculosis control that have helped to save these lives must not be allowed to weaken. Other links must be added. Let us hope that before the next thirty years have passed, the chain will be so strengthened that the new generation will see Doctor Parran's prophecy come true.

WHAT IS GOOD TO EAT?*

By Thurman B. Rice, M.D.

Who originated the idea that those things you like are bad for you and those things you do not like are just what you need? Appetite surely must have been developed through the ages of evolution as a guide by which the various animals were able to choose their food. It must have served those animals well because otherwise they would have become extinct in the tremendous struggle for existence. Surely, the animals which did not know what was good for them to eat are no longer with us. Surely, the fact that man is here and that he is on the top of the heap is proof enough that his appetite and instincts having to do with food must have been reliable for the most part at least.

Now come a lot of people who would have us believe that these instincts are not at all to be trusted. They would have us eat a great many dishes which we detest simply because these dishes contain certain vitamins, minerals, or proteins. They would have us refrain from foods which we desire most heartily because they say they are too fattening, are lacking in something or other, or possibly are hard to digest. We are willing to grant that times have changed and that there is need that some of the instincts be held in check, but in the main we still insist that appetite is the most fundamentally correct of the many methods of choosing food—provided, of course, that the instinct has not been distorted by false teaching, or practices which are definitely injurious.

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* From the Department of Bacteriology and Public Health, Indiana University School of Medicine.

Printed in *Food Facts*.

An example of an instinct or appetite that has needed control recently is the strong desire for sweets which is nearly universal. In a state of nature sugar is not easily procured. It is, however, a most important food ingredient. Children in particular crave sweets because they are quick and rich sources of energy, and children use a lot of energy. The pickaninny in the cane brake twists a stalk of sugar cane and sucks the juice. The lad in the northern states bites off the bottoms of clover blossoms and robs the nest of the bumble-bee—or at least he used to do so before he was so well supplied with sugar at the table. Nature has set her young animals on the search for sugar. They need it and, therefore, crave it. But man has learned to purify sugar and has made it the most concentrated and pure of foods. Likewise, it is among the cheapest of foods from the standpoint of calories per dollar. We import sugar into our cities by the carload, and use it in a thousand ways. Nearly everyone has learned to like the flavor of sugar and in consequence we tend to eat too much of it. Not that the sugar is bad food. It is not. It is excellent food when eaten in the right amount and at such a time that it does not clog the appetite or make other flavors seem pale by comparison. The instinct is quite all right, but the capacity for satisfying the instinct has got out of hand.

In general, we propose as our premise, that appetite as it exists in a normal individual is a reliable guide to the selection of food. Immediately there will be heard protest. What about appetite for alcoholic drinks, for tobacco, for coffee, and other substances which are commonly supposed to be more or less injurious. All of these are cultivated appetites. Children do not like beer, coffee, tobacco and other similar products, but learn to like them because they want to do the things which adults do. My own children regard coffee as being worse to take than medicine. They were curious to taste beer because they had heard that it was so wonderful. One little sip was enough to convince them that they could do very well, as yet, without it.

On the other hand, there are foods which do not rate so high with the food faddists which are most satisfying to a hungry man or boy. When I was a kid on the farm I liked nothing so much as to hear that mother had a big pot of beans for dinner. Beans and bread! It was a meal that would stand by you. It would stick to the ribs when one was working hard. Yet there are those who will point the finger of scorn at beans. "They are hard to digest," it is said, but I never was sick from eating beans in my life. They are not a very good source of protein, but we did not attempt to get along on beans alone. There was always some meat with them, some bread, and milk to drink. Beans practically never can go wrong because of the way they are cooked. Anyway I like them, and it will take a lot of talk to make me think they are anything but one of the best of foods.

We have heard the lowly potato slandered, but again I like them. It is said that they are too starchy, that they are fattening, that they are white, and God only knows what else. The potato has been of vast service to the world and has filled up the big and little hollow places in boys and girls for lo these many years. Ask any housewife how she would like to get along without the lowly tuber, and ask any family of kids whether they would miss them or not. If creamy mashed potatoes with a lot of yellow butter is not food for the gods, then I am no connoisseur of the good things of the earth. I have never been made sick by potatoes, never had them served spoiled, never found them hard to digest, and so far as I can see have had no trouble for lack of vitamins.

The protein of corn is not a perfect protein, it is said. I do not care if it is not. I like corn bread, fritters, green corn, hominy, and corn-meal mush. When the family at our house sits down to a meal of corn bread, milk, and butter, we know God is in his Heaven and that all is right with the world. In case I get to worrying about food deficiency at such a time—which I do not—I remember that this country became great on a corn diet. Those hardy pioneers could not always have their spinach and carrots, but they did pretty well. Maybe we ought to imitate them a little more.

My children—and they are sturdy specimens—like bread and jam, bread and butter, bread and syrup. They go for pie! Horrors! Does a teacher of health eat pie and permit his children to eat pie? Yes, he does and sets them the example. If there is anyone who can explain why a good piece of pie made from delicious fruit is bad food, I should like to have him rise and explain. Parents commonly require their children to eat their vegetables before they can have more bread and jam or pie, and there is a certain reason for doing so. Children really should learn to eat a wide variety of things rather than just those which are tastiest and best. (Shall we say best? I think so.) Consequently, there must be some sort of regulation or there would not be enough dessert to go around, but in the main we insist again that there is probably no better guide to correct diet than the unspoiled instincts and appetite of a healthy child of ten. And does he not have a lot of fun eating when his elders leave him alone?

Yes, there must be parental control at the table, and there must be research in food and food requirements. These efforts serve the purpose of guiding us to the right foods in order that we may be healthy and happy. But parents have been wrong in their ways of rearing children, and distinguished scientists have been wrong in their pronouncements concerning diet. If the instincts and appetites of the human race had been very much wrong, the human race would long since have become extinct. Instead the race is the finest product of all evolution. Draw your own conclusions.

GIFT OF ONE HUNDRED THOUSAND DOLLARS: FOR STUDY OF VOLUNTARY INSURANCE PLANS

A gift of $100,000 to the American Hospital Association for the study and development of voluntary hospital insurance was announced by Edwin R. Embree, president of the Julius Rosenwald Fund, at the annual meeting of the Fund recently held in Chicago. This plan, known as group hospitalization, enables persons of moderate means to secure hospital care by payments of from $6 to $12 per year without recourse to charity.

The program of the American Hospital Association will be carried forward through a special Committee on Hospital Service, of which C. Rufus Rorem of Chicago becomes executive director. The chairman of the committee is Dr. Basil C. MacLean of Rochester, New York, and other members are: Dr. R. C. Buerki, Madison, Wisconsin; Dr. S. S. Goldwater, New York City; Monsignor Maurice F. Griffin, Cleveland, Ohio; and Dr. Claude W. Munger, president of the American Hospital Association.

The work of the Committee on Hospital Service includes two phases: First, advice and consultation to existing plans and those being formed concerning actuarial data, benefits, method of organization, public relations, annual subscription rates; second, relations of hospital service plans to the medical profession, public welfare activities, state departments of insurance, private insurance companies, hospital administration, and hospital accounting. This program is a continuation of the activities of the American Hospital Association since 1933.

Doctor Rorem, who is a certified public accountant, was formerly associate professor at the University of Chicago and is the author of a university text in accounting, as well as several volumes dealing with the economic and financial aspects of hospital and medical care. Since 1931 he has been associate director for medical services of the Julius Rosenwald Fund and since 1933 has been consultant in group hospitalization to the American Hospital Association.

Enrollment in group hospitalization plans is now approaching one-half million employed subscribers and dependents, with more than 150,000 participating in the three-cents-a-day plan for hospital care in New York City. Plans which have enrolled more than 25,000 employed persons are those in Rochester, New York; Cleveland, Ohio; Washington, D. C.; Minneapolis and St. Paul, Minnesota, and Dallas, Texas. Other plans with 5,000 or more subscribers and dependents are those in New Orleans, Syracuse, St. Louis, San Antonio, Houston, Memphis, Sacramento, Newark, Charleston and Bluefield, West Virginia, Kingsport, Tennessee, and a state-wide plan for North Carolina. Nonprofit city-wide hospital service plans have been established or are being organized at the present time in Chicago, Buffalo, Albany, Louisville, New Haven, and Boston.

TWENTY-FIVE YEARS AGO[†]

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. IX, No. 12, December, 1911[*]

From Some Editorial Notes:

Salvarsan.—It is unfortunate that there is such a prevailing opinion that salvarsan has displaced mercury, and that one injection of the new preparation will cure a large percentage of syphilitic infections. It is undoubtedly true that salvarsan may abort early lues, will usually clear up syphilitic eruptions quicker than mercury, works well where the latter drug fails, and is a specific in malignant syphilis. Nevertheless, it is seldom that one injection has the desired effect. . . . —H. M.

* * *

Cancer.—In spite of recent valuable additions to our knowledge of cancer, the treatment remains virtually the same, radical removal of all surgically accessible growths. There is no present indication of change. So far therapeutic progress has been achieved mainly within the domain of surgery and has consisted of the development of technical methods all having a common end, complete removal. . . . —M. S.

* * *

Specialism.—An eminent gentleman spoke disparagingly of the modern tendency toward specialization in the healing art. Said he: "The day of the good old family doctor is, or will soon become a thing of the past; now every portion of the body is covered by a specialty, except the umbilicus. And even that," concluded the learned one, "is in imminent peril." . . .

Our contention is that the tendency to specialize was the inevitable result of problems repeating themselves which called for original thought and recurrent experience, and that without it scientific medicine must have been impossible. . . .

Annual Meeting of the Medical Society, State of California.—The attention of the members is called to the fact that the annual meeting of the State Society will be held in April, 1912, at Hotel Del Monte. The Committee on Scientific Work is now considering the matter of arranging the program and those desirous of presenting papers are respectfully requested to send their titles as soon as possible to Dr. William Ophüls, Chairman Committee on Scientific Work, Lane Hospital (corner Clay and Sacramento streets), San Francisco. . . .

From an article on "The Significance of Pelvic Pain" by Ray Lyman Wilbur, M.D., San Francisco.

Any physician who deals much with sick women and who has not had his senses somewhat dulled by the constant repetition of the complaints of pain in the pelvis, back, legs and abdomen that daily assail him must be without the normal type of nervous system. Experience has shown him that so many of these pains disappear or are no longer spoken of as soon as health follows anemia, rest follows fatigue, comfort follows worry, happiness follows gloom, or normal peristalsis of the bowel is established, that he unconsciously discounts most of the assertions made to him and often looks upon them merely as hysterical or neurasthenic manifestations. Yet pain, as we all know, is our greatest friend whenever the peritoneum is threatened, and we know what a prominent part in acute illnesses and early deaths the peritoneum plays. Where would modern abdominal surgery be were it not for pain? Its triumphs would be of a very different sort than they are today. . . .

(Continued in Front Advertising Section, Page 18)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA[†]

By Charles B. Pinkham, M.D.
Secretary-Treasurer

Board Proceedings

"Officers of the State Board of Medical Examiners retained their offices here after an election at the annual meeting here. Dr. William R. Molony of Los Angeles president; Dr. Clark L. Abbott of Richmond, vice-president; and Dr. Charles B. Pinkham of San Francisco, secretary-treasurer, are the officers. Doctor Pinkham has held his position for twenty-four years. . . ." (Associated Press dispatch, dated Sacramento, October 21, and printed in the San Diego *Tribune,* October 21, 1936.)

The following changes in status of licentiates were made by the Board of Medical Examiners at the annual meeting held at the State Capitol, Sacramento, October 19 to 22, 1936:

Isaac S. Clark, M. D., Long Beach, narcotics, on October 21, 1936, placed on probation for five years without narcotic privileges or possession.

Hugo W. Foss, M. D., Los Angeles, narcotic violation. Licensed revoked on October 21, 1936.

George W. O'Donnell, M. D., San Francisco, alleged illegal operation. License revoked on October 21, 1936.

Frank J. Parizek, M. D., Los Angeles, narcotics, on October 21, 1936, placed on probation for five years without narcotic privileges or possession.

Lee Edward Smith, M. D., Oakland, violation of probation re narcotics. Licensed revoked on October 21, 1936.

Wade H. Walker, M. D., Long Beach, narcotic violation. Licensed revoked on October 21, 1936.

George H. Wymann, M. D., Los Angeles, penitentiary sentence re abortion. License revoked on October 21, 1936.

The hearings on the following were continued to the next meeting of the Board, to be held in Los Angeles: John E. Cummings, M. D., Los Angeles; Henry L. Gardner, M. D., San Francisco; Oscar Charles Long, M. D., Brawley; Francis W. Steddom, M. D., Los Angeles; George E. Watts, M. D., Los Angeles; Thomas D. Wyatt, M. D., Redding.

The following were dismissed: Quinter O. Gilbert, M. D., Oakland; Samuel A. Twain, M. D., Berkeley.

News Items

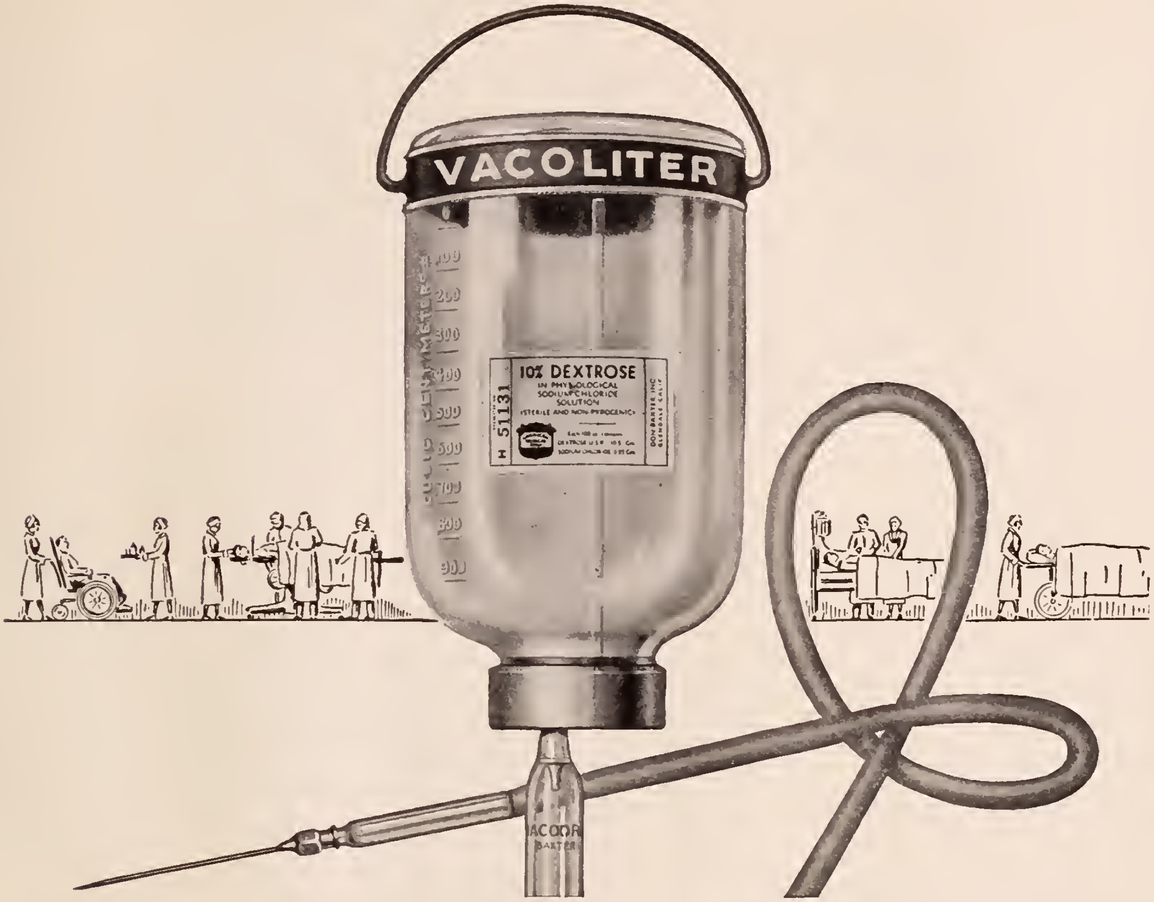
"Hysterics and a fainting spell by a woman witness yesterday threw out of gear the Superior Court trial of fourteen women as alleged operators of a gigantic Pacific Coast illegal operations syndicate. . . . Mrs. Gladys Duckworth of Santa Monica, a former patient of the operation syndicate, was unable to tell her story to the jury because of an emotional outbreak brought on, she explained, by word that she had just been discharged by her employer, a Santa Monica dentist. She said the dentist objected to her agreement to testify in the case and had communicated her discharge by telephone as she waited in an anteroom to the court. . . . A ten-minute recess was ordered and she returned to the anteroom, where she toppled to the floor in a dead faint as her name was called again. . . . When she had been restored to consciousness, Deputy District Attorneys Verne Ferguson of Los Angeles and J. J. McMahon of San Francisco informed her she need not testify at all unless she wished. . . . Meantime her divorced husband, Frederick Duckworth, gave brief testimony, which was to have followed Mrs. Duckworth's as corroboration of her statement that she became critically ill after an operation in 1935 at the alleged Los Angeles Clinic of the organization. . . . Her testimony, Ferguson said, will be similar to that given at yesterday morning's session by Mrs. Dorothy Woods of Long Beach. Both stories, the Prosecutor informed the Court, will substantiate the prosecution claim that leaders of the alleged

(Continued in Front Advertising Section, Page 21)

[†] This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

[*] As stated on page 355 of the September, 1911, issue of the *California State Journal of Medicine*, owing to the illness of its editor, Dr. Philip Mills Jones, the *Journal* would be brought out by the Publication Committee.

[†] The office addresses of the California State Board of Medical Examiners are printed in the roster an advertising page 6.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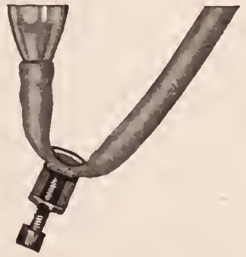

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BOARD OF MEDICAL EXAMINERS

(Continued from Front Advertising Section, Page 30)

Attorney Vernon Ferguson of Los Angeles seven canceled $1,000 checks as payment she had made to Rankin from January to July, 1935, for the San Diego Clinic. She said that late in 1934 she learned from druggists who had been referring patients to her clinic that 'a bunch of big doctors are coming to town.' The syndicate's offices were established, she said, on January 1, 1935. On January 25, she continued, Byrne visited her establishment, displayed his badge and threatened her with jail. He told her, she testified, that the affair could be adjusted if she would visit him and Rankin in Los Angeles, prepared to 'team up' with his organization. . . ." (Los Angeles *Examiner,* October 15, 1936.)

"Held on suspicion of drunk driving, Dr. Robert V. Baker, resident physician at Olive View Sanitarium, was in the prison ward of the General Hospital yesterday. Witnesses told police that on Friday night they followed the doctor's car from Burbank to San Fernando Road and Vineland, observing his assertedly erratic driving. At the intersection, they said, his car crashed head on into a sedan in which Mr. and Mrs. Leslie A. Wright of Saugus and Wright's mother were riding. All persons involved in the crash were cut and bruised." (Los Angeles *Examiner,* September 27, 1936.)

"Dr. Ernest L. Hildreth of 2007 West Sixty-ninth Street, yesterday was found guilty by Municipal Judge Aggeler on a charge of drunk driving. According to the testimony of Officers Hoover and Benson of the State Motor Patrol, the physician sideswiped their machine last August 31, near Slauson Avenue and Byrnhurst Street. . . . " (Los Angeles *Times,* September 26, 1936). The name Ernest L. Hildreth does not appear in the 1936

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HOLIDAY.. GREETINGS

The National, State and Local Tuberculosis Associations of the United States

directory published by the Board of Medical Examiners or the Board of Osteopathic Examiners.

"Dr. M. E. Eastman, sixty-two, of Pleasanton, yesterday decided not to risk trial on three felonies and pleaded guilty to a charge of selling stock prior to the incorporation of the concern involved. . . . In addition to the charge to which he confessed, he was to be tried for grand theft and selling stock without a license. His arrest grew out of the sale of $1,000 stock in his Tuberculosis Foundation at Las Vegas, Nevada, to Mrs. Faye E. Bradley, 2206 East Thirty-second Street, Oakland. . . ." (San Francisco *Examiner, East Bay Edition,* October 2, 1936.)

"Hundreds of 'case records' of women throughout the State who assertedly were victims of an alleged illegal operation ring, were introduced into evidence today at the opening of the third week of the trial of thirteen persons charged with participating in the alleged ring. The opening wedge in the State's effort to introduce the 'case records' was made through the testimony of pretty Dorothy Wood, 18, of Long Beach. Under questioning in Superior Judge Arthur Crum's Court by Deputy District Attorney V. L. Ferguson, the girl declared she signed her name to a blank card when she started preliminary steps toward an abortion. It was brought out through the questioning that when Miss Wood's card was discovered among hundreds of others, after the raids that led to the charges against the thirteen persons, the card bore a notation that the operation was necessary to save her life because she suffered from an acute abdominal condition. Deputy Ferguson attempted to show, through Miss Wood's answers,

(Continued on Next Page)

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

that the notation was made 'in case something happened to her.' Miss Wood also testified, in identifying her signature on the card at today's court session, that she also had identified it when shown her by officers several weeks ago. Then back to the witness stand went Detective Lieutenant George J. Engler (San Francisco Police Department), leader of the raids and one of the principal state witnesses. He started what was expected to be an hour-long introduction of the case records. . . . A fat, black book, which purportedly contains the names of physicians who referred abortion cases to an illegal operation ring, today was said to be attracting as much interest in medical circles as Mary Astor's famed diary did in film circles. The only section of the book to be made public referred to a hospital where an asserted abortion was performed. Belief was expressed in court circles that attorneys for the thirteen defendants would demand that the entire book be made a part of the court record to show that a large portion of the medical profession condoned illegal operations by referring them to the asserted syndicate. . . . Although the prosecution has not indicated its attitude in the matter, hope was expressed that the diary would be impounded, as was the diary of Film Actress Mary Astor in her child-custody battle with Franklin Thorpe." (Los Angeles *Evening Herald and Express,* October 19, 1936.)

Moreover, public policies are not made up entirely of scientific facts. Facts are only the background; they determine what lines of action are possible. The policies that will actually be adopted depend upon the desires of the people, modified by their understanding of the facts.—National Resources Committee Report, June 15, 1936.

Can you account him wise or discreet that would willingly have his health and yet will do nothing that should procure or continue it?—Robert Burton.

"Is This Product Council-Accepted?"—This is the first question many physicians ask the detail man when a new product is presented.

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Physiologic Effects of Benzedrine.—Myerson, Loman and Dameshek (*Am. J. Med. Sci.,* October, 1936) report on the physiologic effects of the sympathomimetic amine, benzyl methyl carbinamine ("Benzedrine") in adult humans. Administered parenterally in varying doses, the average rise in systolic blood pressure was 29 millimeters of mercury. The height of blood pressure was attained in an average time of forty-six minutes and reached its normal level two to eight hours after administration. Orally, in rather large doses (40 milligrams), the blood pressure increases were nearly identical with those after parenteral administration except that the action was delayed. Atropine when combined with Benzedrine markedly

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enhances its effects. A parasympathetic stimulant, mecholyl, when given with or during the period of Benzedrine action, exerted its depressor effect over a shorter period, temporarily nullifying the action of Benzedrine without being antagonistic to its continued prolonged action. Benzedrine has a definite stimulating action on the central nervous system as shown by the shortening of sodium amytal narcosis. A marked rise in both white and red blood cells, with a lowering of color index, was usually found. These increases were apparently mechanical and of no clinical significance. The authors state that they did not observe an increase in basal metabolic rate or blood sugar. Reference is made to the good effects of Benzedrine in lowered mood and in certain fatigue states; these are the subject of a separate study, as is the drug's action in relaxing gastro-intestinal spasm.

Did You Pay Your Share of Taxes?*—Taxes collected in California last year "averaged" $246.50 for each of the two and a half million persons in this State who are employed for wages or salaries or who receive an income from some other business or occupation.

If you are an "average" person in this group, with an "average" income of $1,400 a year, then "your share" of these taxes collected last year is indicated to have been $246.50.

Now if you are actually earning about $1,400 a year (or $120 a month), is is very likely that you will say: "These averages must not apply to me. I don't remember paying any $246.50 in taxes last year. This can't be my share."

Of course, no one sent you an official bill for that amount. You actually may have paid more or less, depending on where you live and how you spent your income. But if you will study the ninety or more varieties of taxes levied in California by the local, state, and federal governments, and trace these down to the ultimate consumer or *actual* taxpayer, you will discover that you did pay nearly as much as these averages indicate to be "your share."

Taxes Collected in California—1935

Average for Each Employed or Otherwise Gainfully Occupied Person

			Your Share
Local taxes on property			$ 91.88
County taxes on property		$27.20	
City taxes on property		36.98	
District taxes on property		27.70	
State taxes			61.23
(*a*) Retail sales tax		$22.59	
Gasoline tax and auto license		18.72	
(*b*) Gross receipts of public utilities		13.30	
Liquor taxes and licenses		2.13	
Other state taxes		4.49	
Federal taxes			93.39
TAXES ON NECESSITIES		$31.09	
(*c*) Hogs, wheat, cotton, etc.	$13.37		
Gasoline, oil, etc.	5.25		
Autos, bodies, tires, etc.	2.12		
Other necessities (taxes and duties)	10.35		
TAXES ON LUXURIES		$28.92	
Tobacco	$13.61		
Liquor	11.33		
Other taxes and duties	3.98		
TAXES ON INCOMES AND INHERITANCES		$33.38	
Total taxes			$246.50

(*a*) Average under old sales tax law, before exemption of food.
(*b*) Not in effect during 1936.
(*c*) Processing taxes not in effect during 1936.

Only about 10 per cent of these were *direct* taxes which you realized you were paying, or remember. The remainder were hidden and indirect taxes, concealed in the prices of things you bought, and in your cost of living.

Study these averages indicating "your share" of taxes collected last year, keeping in mind that if your income was higher or lower than $1,400 a year, "your share" was proportionately higher or lower.

(Continued on Next Page)

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* This information sponsored by the California State Chamber of Commerce.

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(Continued from Preceding Page)

Take a few of the larger items of tax collections, and see how they apply to your own case. You will have to modify them, of course.

If you have an income of $1,400 or less you probably did not pay any of the direct taxes on corporation or personal net incomes or inheritances. But you can take out all of these forms of State and Federal taxes, and it will only reduce the average somewhere between $35 and $40.

That still leaves well over $200 in taxes which are paid by every one, and mostly hidden in the cost of living.

Local Taxes:

Start with the local property taxes. Your indicated "average" share of these taxes is $91.88. If you own a home or other personal property with an assessed value of $2,000, you actually paid about $70 in direct taxes. If you rented a house, apartment, or a room, you can figure that 25 per cent or more of your rent bill was for property taxes. It amounts to about the same either way.

When you have figured these up, you may be short of the $91.88 average. But remember that the industrial and business enterprises which provide all of the necessities you buy, also paid property taxes. Do you think that the manufacturer, the trucking company, or your butcher, or grocer or department store forgot to add these and other taxes into the prices of the things you bought? Certainly not. They would not stay in business long if they did.

So even if you do not own *any* taxable property, you probably paid more than your indicated share of these local property taxes. Why? Because most of your income was spent for rent, food, and clothing, and most of our taxable industrial property is used to supply these and similar necessities.

State Taxes:

Your indicated "average" share of State taxes was $61.23. That was only 25 per cent of the total of all taxes collected last year.

You may be surprised to find that the general retail sales tax which was in effect in this State last year, provided only 9 per cent of the total tax revenues collected from California residents. Your indicated share of the retail sales tax was $22.59. Possibly this is the only tax you remember paying. It was a *direct* tax, and it was not hidden in the prices of things you bought.

Last year family budget experts at the University of California figured that the retail sales taxes for a family of five with a $1,500 a year budget, amounted to $21.64, of which $12.12 was tax on foodstuffs. This year since foodstuffs have been exempted from the tax, the same family will pay only $11.41 in sales taxes. This State tax is no longer a general sales tax. Under the new law persons with higher than average incomes now pay a much larger share of this tax than they did last year.

Your indicated share of the State tax on gasoline, and the automobile license fees, was $18.72. If you or your family did not own a car, you can subtract most of this from your "average." But if you did operate a car, then you probably paid more than this amount of taxes. If you drove a car 10,000 miles last year, the three-cent State tax on gasoline alone would amount to about $24.

Your share of the State taxes levied last year on public utility gross receipts was $13. Most, if not all of these taxes were passed on to the users of electricity, gas, telephones, railroads, and busses, hidden in the prices paid for these services.

You are the only one who knows, of course, whether you paid any liquor taxes, or more or less than your indicated share of $2.13 in State taxes on liquor last year. Whatever it was, you can figure that it will be about two and one-half times as much this year under the new laws.

Most of the remaining State taxes, of which your indicated share was $4.49, were inheritance, and bank and corporation franchise taxes. Most but not all of these can be subtracted from your average.

Federal Taxes:

Your indicated "average" share of Federal taxes last year was $93.39. As already noted, your $33.38 share in that total which was collected from corporation and individual incomes, inheritances, estates, etc., was mostly paid by persons with incomes over $1,400 a year.

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But the other 65 per cent of Federal taxes were excise and similar taxes on articles and services used by all consumers. Your share of these is indicated to be $60. You may be surprised to see that this is practically equal to your share of all State taxes combined.

Your indicated average share of the Federal processing taxes levied last year on hogs, wheat, cotton, sugar, rice, and peanuts, totaled $13.37. Whether you paid more or less than this depends on the size of your family.

If you own an automobile, you paid a Federal tax of 4 cents a gallon on lubrication oil, 1 cent a gallon on gasoline, 2¼ cents a pound on tires, 4 cents a pound on inner tubes, 2 per cent on accessories, bodies and parts. The average of $7.37 is low in this case.

Excise taxes and duties on other necessities averaged $10.35. This includes the excise taxes on electricity, matches, toothpaste, soap, chewing gum, flour, and scores of others, such as telephone and telegraph messages and safety deposit-box rentals. None of these alone is very big, and they were hidden in the prices you paid, *but you paid them.*

Your share of the Federal excise tax on tobacco was $13.61, but if you smoked a package of cigarettes a day, you actually paid $22 into the treasury on that item alone. Your share of the Federal taxes on liquor was $11.33. Other luxuries taxed were playing cards, perfumes, cosmetics, jewelry, radio parts, sporting goods, and admissions to theaters, boxing contests, or football games. Anywhere from 10 to 50 per cent or more of the prices you paid for these luxury items were for taxes.

Conclusions:

What does this mean? It means that those who think that taxes are paid by "someone else," or that the average man or woman has no concern in the cost of government, are fooling themselves.

It means that you did pay most, if not all, of your indicated "average" share of taxes last year, even though they may have been so hidden and indirect that you did not realize it.

(Continued on Page 41)

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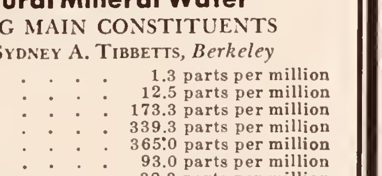

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(Continued from Page 39)

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Federal—California's Share	
Borrowings	$198,000,000
Indirect taxes on necessities	81,000,000
Indirect taxes on luxuries—tobacco, liquor, etc.	72,000,000
Direct taxes on incomes and inheritances	83,000,000
State	
Borrowings	24,000,000
Non-tax revenue	12,000,000
Indirect taxes on business	50,000,000
Direct taxes on gasoline, auto licenses, etc.	47,000,000
Direct taxes on retail sales	56,000,000
Local	
Borrowings	40,000,000
Non-tax revenue	30,000,000
Direct taxes on property	230,000,000

Therapeutic Value of Lump-Sum Settlements for Industrial Neuroses.—There is little or no therapeutic benefit in cash settlements paid to injured workmen who have traumatic neuroses, according to an investigation made recently by Carl Norcross, Ph.D., of the Rehabilitation Division of the New York State Department of Education. Results of the investigation have been published under the title "Vocational Rehabilitation and Workmen's Compensation," and the report is a follow-up study of 322 workmen's compensation cases throughout New York which were closed by a lump-sum settlement of $1,000 or more.

It has been generally accepted in both medical and workmen's compensation circles throughout the country, says the report, that a cash award would help to cure a neurosis. "A careful investigation made a year or more after the settlements has convinced us that the value of a cash award is vastly overrated," writes the author. "It is the settlement of the case, the actual ending of the litigation, which is of value. Whether the final compensation award is paid in one lump or extended through a number of installments makes little difference to the claimant's condition."

The investigation disclosed that 16 per cent of the men had lost a large share of their compensation through unwise expenditures. The men who had no losses were found to have dissipated their funds much more rapidly than they would have under an installment system. Both be-

(Continued on Next Page)

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* Issued by Committee on Governmental Expenditures and Taxation, California State Chamber of Commerce.

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(Continued from Preceding Page)

cause there was found to be a wastage of compensation funds, and because there appeared to be no therapy in the settlements, the author has recommended that lump-sum settlements be discontinued.

Doctor Norcross makes a number of recommendations for improving the handling of neurotic cases in the workmen's compensation rooms. He urges that cases be given a more prompt and careful handling. The average neurotic case is open in the workmen's compensation division for nearly three and one-half years, it is said, and much of the delay is unnecessary.

The author states that neurotic conditions grow as cases are delayed. He also points out the dangerous policy of permitting claimants to read their own medical reports, or to be present when physicians are testifying, especially in contested cases where there is a difference of opinion.

In New York a compensation case theoretically may always be reopened. The report suggests that it is a poor policy to let neurotic claimants know that when their money is spent that they may try to reopen their cases. The author believes that one of the evils of the existing New York system in non-schedule cases is that claimants must be willing to accept a lump-sum settlement. After a fair offer is made, the neurotic claimant may procrastinate indefinitely by refusing such a settlement. Thus the case is delayed, and the patient's mental condition may become worse. The remedy suggested by the report is that the referee, acting on competent medical advice, fix a fair settlement and close the case, with the award being paid in biweekly installments.

To overcome any prejudice the claimant may have toward the insurance company, it is suggested that the money be paid to a state-administered trust fund, which already exists in New York. The carrier could close the

(Continued on Page 44)

Convalescents Require the High-Caloric Diet

COMMUNICABLE DISEASES

Disease	*Incubation Period* (average)	*Isolation Period* (average)
Chicken Pox	12-16 Days	3-14 Days
Diphtheria	2-4 Days	After 12th Day—until cultures negative
Epidemic Meningitis	1st Week	Until cultures negative
Measles	2nd Week	Until 5 days from onset rash
Mumps	3rd Week	Duration of Swelling
Poliomyelitis	3-10 Days	21 Days
Rubella	3rd Week	Duration of catarrh and rash
Scarlet Fever	1st Week	After 21st Day—until cultures negative
Whooping Cough	2nd Week	Until 4 weeks from onset whoop

From American Journal of Public Health—March, 1927

INFECTIOUS FEVERS deplete the child's vitality. It is an exhaustion comparable to fasting. Convalescent children show a low metabolism for several weeks following the disappearance of the fever. The low metabolism is the consequence of generalized cellular damages.

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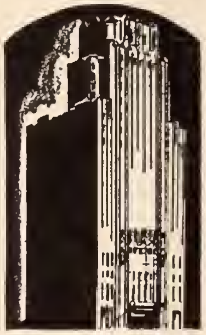

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(Continued from Page 42)

case on its books, and the claimant could be told his case is definitely closed but that he would get all his money, regardless of his state of health. The patient would not have to remain sick to get his award.

Provision is made for permitting the claimant to get an advance on his compensation for any necessary purpose, including rehabilitating himself on a farm or in a small business.

Copies of the report may be secured through the publisher, The Rehabilitation Clinic, 28 East Twenty-first Street, New York City. Price, $1.

The Early Diagnosis of Cancer.—Cancer is curable in the early stages; however, the early stage cannot be diagnosed by the patient, but can be discovered by the alert family physician. *The keystone of cancer control is early and correct diagnosis.*

The early signs or symptoms of cancer should be familiar to the laity. When they appear, the advice of the family physician should be sought without any delay.

When chronic ulcers of the skin become hardened, it may mean a beginning cancer.

When a pigmented mole turns black, it probably is turning into a cancer.

When keratoses or scaly elevations or warts of the skin become moist, it is an indication that the usually benign character of such lesions is undergoing malignant changes.

When leukoplakias or white, thickened patches on the mucosae begin to crack open, they must be immediately treated, as this change indicates malignant transformation.

When difficulty in swallowing is felt, a cancer may be forming in the esophagus. An x-ray examination and inspection with the esophagoscope will immediately enable a correct diagnosis to be made.

When a cough without any other signs appears, x-ray pictures of the lungs should be taken immediately, as cough is often the first sign of cancer of the lung.

When a chronic breast inflammation shows hard nodes, an x-ray picture of the breast gland should be taken. If the lesion is shown to be diffuse, an excision, under local anesthesia, should be performed and all the tissue examined microscopically, to rule cancer out or in.

When loss of appetite seems to come out of a clear sky, or indigestion has existed for a long time, clinical and x-ray examinations of the stomach must be made without delay, as the symptoms may mean cancer.

When hoarseness or huskiness of the voice sets in, cancer of the larynx should be feared. Examination with a throat mirror will immediately show whether a tumor has formed.

When blood is passed from the genital organs, the bladder or the rectum, examinations with special instruments are called for to determine the true significance of the bleeding.

During the climacteric, an increase in the amount and duration of the monthly flow or the appearance of bleeding at irregular times is especially significant of cancer.

When persistent pain takes place in a bone, x-ray pictures should be taken. Such pain frequently means the onset of cancer.

When a discharge appears, especially from the female genital organs, we must remember that such signs and symptoms may mean impending cancer. Immediate examination will enable the physician to determine whether a new growth is developing.

Therapeutic measures for the arrest of cancer have been developed to a high degree. The methods consist of surgery, either with the cold knife or with the electrotome, and of radiation therapy with roentgen rays and radium. No other methods are now known to exist by which cancer can be totally eradicated. Yet these remedies will remain impotent unless early diagnosis furnishes the surgeon or radiologist a fairly localized and beginning cancer. When diagnosis is obvious, most cancers are already in the incurable stage. Yet, in most cases, diagnosis is possible when the disease is curable by modern methods. The

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difference between early and late diagnosis means the life of a patient. There is no other major cause of death in which early diagnosis occupies such an important position.

The difficulties in the diagnosis of cancer are very great, probably greater than with any other group of diseases. Every organ and tissue of the body may become the primary seat of a malignant growth. Therefore the diagnosis calls upon the resources of every one of the medical specialties and general medicine and surgery.

Cancers may be accessible or inaccessible. They are accessible if they can be seen or if they can be exposed to view by speculums and endoscopes. The inaccessible cancers are those of the internal organs, as the cavity of the skull, the chest, the abdomen, the bones, etc. Yet modern medicine has bent all its energies on improving its diagnostic aids by the construction of artificially lighted instruments known as endoscopes which may be inserted into the body canals and hollow organs to enable the physician to inspect these regions. Modern x-ray diagnosis, also, has resulted in depicting lesions in these otherwise inaccessible cavities and thus aids the physician in the diagnosis of disease conditions in otherwise inaccessible regions of the body. The inaccessible or internal cancers outnumber the accessible or external.

Cancer in the beginning stage or beginning nodule is silent—it gives no local or general subjective symptoms until it reaches a certain stage. The suspicion of cancer should be constantly in the mind of the physician and the laity. Cancer-mindedness will thus lead to the discovery of the early cases. A great deal of assistance is given by the fact that cancer rarely develops in a previously healthy tissue, but generally in tissue altered by chronic disease and subjected to chronic irritation. Cancer generally develops slowly and by successive stages.

The above-mentioned signs and symptoms should lead the physician and the layman to think immediately of the possibility of precancerous lesions or impending cancer. The physician should strive to obtain an immediate and correct diagnosis without procrastination. Delay in diagnosis is the best friend of cancerous disease and the greatest enemy of the cancer patient. Precancerous lesions and early cancers are curable.—Editorial from *Physical Therapy and Radiology,* June, 1936.

Home Work By Young Pupils May Have Bad Effects.—Schools of Ohio have begun or are beginning the yearly turn of the wheel of education, and with this recurrent activity again under way, questions arise as to the number of foot pounds (or tons) of home work to be laid on the 2,000,000 pupils subject to its discipline. With increased crowding of the curricula, increased emphasis laid on athletics, and the marked increase in social activities (which have almost reached the "required" stage) there is strong temptation to increase the amount of home work laid on the pupils, and there seems to be ample evidence that there has been much yielding to temptation.

In many of the schools home work is started in the second or third grade. There are few in which the fourth grade is passed without assigned home work. From these beginnings until the day of the diploma is reached, the educational "forcing beds" pile more and more home work on the pupil with each successive grade.

What is the effect on the health of the individual pupil? What is the mass effect on the health of the people?

Unhappily, not much is known about these effects. The casual observer can judge only from isolated cases that come under his eye. It would be well if some thorough research were done to supply the answers. Fortunately, some consideration has been given to the problem through an agency from whose report may be deduced some definite conclusions. The Association of District Superintendents of New York City studied the question in 1929 and formulated these recommendations:

"Quality, not quantity, should be the standard of efficiency in judging the results of home work.

"Compulsory home work should be prohibited for children below the fourth school year.

(Continued on Next Page)

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(Continued from Preceding Page)

"For pupils in seventh-year classes, the maximum time for home lessons should be one hour. In eighth-year classes it should be one hour and a half.

"No home work should be permitted unless adequate explanation has been given in school by the teacher.

"Principals should control the specialists in departmental work and prevent the demand for the preparation of too elaborate notebooks, drawings, maps, or essays.

"In every school some uniform plan should be adopted to regulate the general plan of home study, and throughout all grades teachers should be directed in the use of the study period where such period is utilized."

Another analysis of the home-study problem sets forth that:

"Only work that can be done without help of parents should be assigned.

"Home study should be made a privilege.

"It should not be too difficult.

"Assignments should be made according to capacity and individual needs and for variety in subsequent class work.

"Work should be regular in amount from day to day.

"Half the time should be devoted to written work.

"Assignments should be made when the class is alert and not in the clamor of the last moments of the period."

Home conditions should be taken into account. No one can be expected to do good work in a bedlam of noise. It may be conceded that home study is not undesirable, provided (1) that the home is healthful and reasonably quiet; (2) that the study imposed is not excessive in amount (requiring so much time as to prevent sufficient leisure for recreational and other activities; (3) that it is not too exacting in nature; and (4) that the child know what he is to do and how to do it. To these might well be added: "That it is not started too soon, and that in all ages it shall not be permitted to interfere with required sleep."

However, to approach a real solution of the problem will require some real research work through the combined efforts of health authorities, school management and the school medical service.—*Ohio Health News.*

Some parents actually try to scold health into their children. Health, however, is not understandable to children, at least before they reach twelve years, and when we plead with a child to safeguard his health, he may begin to imagine there is something the matter with him; else, he reasons, why should mother or father talk so much about it? A sense of insecurity may develop. Thinking too much about one's body is enough to bring on sickness—mental sickness at any rate— and it is a very difficult condition to cure.

Many of us are victims of the days when child psychology was not so well understood and when nagging was the nearest our parents ever got to constructive discipline. The fears engendered in those early years left an indelible impression that accounts for peculiarities and prejudices which may handicap us for life. Let us avoid passing on this error to the next generation, by remembering that *nagging never pays.—Florida Health Bulletin.*

Your Share of Federal, State, and Local Government. — The California State Chamber of Commerce is sponsor for the following information:

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salaries, or from other gainful occupations, such as farming, business, or professions.

"If you are an 'average' person in this group your income in 1935 was about $1,400. Your proportionate 'average' share of the total cost of all forms of government for this state was about $360, or a sum equal to one-fourth of your income. Your 'average' share of tax and other revenues collected was $264 and your share of increased debt for that year was $96. If your actual income was above or below that average of $1,400 a year, then it may be assumed that your share was correspondingly higher or lower.

"Keeping this in mind, these figures will give you a fair measure by which to compare *'your share'* of public expenses, with your own individual income and expenses:

* California's Public Expenses

Average for Each Employed or Otherwise Gainfully Occupied Person in This State

How the Money Was Spent	*Your Share*
Relief and social welfare	$106.47
Education	54.97
Interest on public debts	37.43
National defense	29.27
Streets and highways	27.97
Police and fire protection	26.18
Farm recovery (AAA and other)	24.45
General government, state and local	13.51
General government, federal	11.07
All other functions	28.73
Total	$360.05

* California's Public Revenues

Where the Money Came From		
Borrowed (deficits, bond issues, etc.)		$ 96.34
Non-tax revenue (licenses, fees, etc.)		17.21
Tax revenues		246.50
Local (county, city, district)	$91.88	
State government	61.23	
Federal (California's share)	93.39	
Total		$360.05

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* California's state and local governments and California's share of federal expenditures and revenues during the fiscal year ending June 30, 1935.

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